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(Second)

ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

March, 1956



DOMINION BUREAU OF STATISTICS  
Public Finance and Transportation Division  
Transportation and Public Utilities Section

57-  
204





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Public Finance and Transportation Division  
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*Second*

**ANNUAL ELECTRIC POWER SURVEY OF  
CAPABILITY AND LOAD**

**March, 1956**

*Published by Authority of*  
**The Right Honourable C. D. Howe, Minister of Trade and Commerce**

## TABLE OF CONTENTS

	<u>Page</u>
Introduction.	1
Review of Survey Results.	2
Definitions.	5
Chart A: Net Generating Capability within Canada, 1950 through 1959.	6
Chart B: Net Generating Capability within Provinces, 1950 through 1959.	7
Chart C: Net Capability and Firm Demand within Canada, 1950 through 1959.	9
Chart D: Net Capability and Firm Demand within Provinces, 1950 through 1959.	10
Chart E: Firm Energy Requirement within Canada, 1950 through 1959.	12
Table I: Summary by Provinces and Canada, 1950 through 1959.	13
Table II: Net Generating Capability within Provinces, 1950 through 1959.	25
Table III: Firm Power Peak Load within Provinces, 1950 through 1959.	26
Table IV: Firm Energy Requirement within Provinces, 1950 through 1959.	27
Table V: Indicated Reserve, 1950 through 1959.	28
Canadian Electrical Association Statistical Policy Committee.	31
Electric Power Survey Committee.	32



## Introduction

This report presents the results of the second annual electric power survey of capability and load which was conducted in March, 1956 by the Dominion Bureau of Statistics in co-operation with the Canadian Electrical Association. The 82 electric power producers covered by this survey include all major private and publicly - operated electric utilities and certain other power-producing companies, part of whose production is generally for sale to the public. These 82 electric power producers generated approximately 98% of the power for sale in Canada and approximately 90% of the total kilowatt hours produced in the country. The figures contained in this report can, therefore, be regarded as representative of the whole electric power industry in Canada. In some provinces, however, the percentage coverage is considerably lower than for the country as a whole.

The first survey covered only capability and firm power peak loads, but, for the second survey, producers were also asked to report annual firm energy requirements. The results are presented for Canada as a whole and for each individual province for the ten years 1950-1959.

Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load. Throughout the report, the full amount of contractual commitments for firm power is reported.

Net generating capability, as shown in the tables, is the output of generating facilities after deducting station service. It is based on actual operating experience assuming all equipment available at the time of the annual firm power peak load with no deduction for equipment not operating at that time, and with no allowance made for the effect of unfavourable water and ice conditions. Net generating capability should not be construed as representing the total installed capacity of the facilities on the basis of name-plate ratings.

For the years 1950 to 1955, the net generating capability is shown for installations actually in existence during the month in which the firm power peak load occurred. For the years 1956 to 1959 it is forecast by adding new installations to the 1955 capability and deducting units retired.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table 1) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means generating capability plus purchases outside the province less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

### Review of Survey Results

#### Summary:

Net Generating Capability: The generating capability of Canada in 1955 amounted to 13,905 thousand kilowatts, an increase of 6.1 per cent over the 1954 total of 13,101 thousand kilowatts. The generating capability is expected to be 19,339 thousand kilowatts in 1959, an increase of 39.1 per cent over 1955. The proportion of thermal generation to the total is expected to rise from 12.6 per cent in 1955 to 15.4 per cent in 1959.

Firm Power Peak Load: The firm power peak load or demand within Canada amounted to 12,291 thousand kilowatts in 1955, an increase of 10.5 per cent over the 1954 total of 11,125 thousand kilowatts. By 1959 the load is forecast to rise 39 per cent to 17,086 thousand kilowatts.

Indicated Reserve: The indicated reserve in Canada in 1955 was 1,486 thousand kilowatts and is expected to be 2,197 thousand kilowatts in 1959.

Firm Energy Requirement: The indicated firm energy requirement in Canada was 72,633 million kilowatt hours in 1955, an increase of 10.1 per cent over the 1954 total of 65,978 million kilowatt hours. It is expected to climb to 101,508 million kilowatt hours in 1959 or by 39.8 per cent.

Table 1 - Summary (Pages 13 to 24): This table presents the information which was collected from each of the 82 producers of power included in the survey, summarized for each of the provinces and for Canada. It shows the capability, firm power peak load, indicated reserve, and, for the first time, firm energy requirements.

Table II - Net Generating Capability Within Provinces (Page 25): The growth in net generating capability as illustrated in Table II is quite impressive. During the four-year period 1951-1955 the growth for Canada as a whole amounted to 4 million kilowatts or 40.9 per cent over the 1951 total. The indicated



growth of 39.1 per cent during the forecast period 1955 to 1959 represents an additional 5.4 million kilowatts of net generating capability. The total growth, both actual and planned over the period 1951 to 1959, is 96 per cent.

Although the forecast of net generating capability for Canada as a whole shows an increase of 96 per cent for the period 1951 to 1959, it varies considerably for the several provinces from a low of 31.8 per cent for Newfoundland to 204.8 per cent for British Columbia.

Table III - Firm Power Peak Load within Provinces (Page 26): During the period 1951 to 1959 the firm power peak load or demand within Canada is expected to increase by 8 million kilowatts or 87.9 per cent.

Whereas the actual increase in firm power peak demand experienced during the period 1951 to 1955 amounted to 3.2 million kilowatts or 35.2 per cent over the 1951 total, that forecast for the next four years amounts to 4.8 millions or 39 per cent over the 1955 total.

The increase, 1951-1959, for Canada as a whole, reflects a fairly steady and consistent growth from the 9 million kilowatts in 1951 to 17.1 million forecast for 1959. The actual growth experienced in the past four years, 1951 to 1955, amounted to a rate of 7.9 per cent per annum. The increase, forecast for the next four years 1955-1959 inclusive, is equal to a rate of growth of 8.6 per cent per annum.

Table IV - Firm Energy Requirement within Provinces (Page 27): Kilowatt hours needed to meet the firm energy requirement within the country totalled 72,633 million in 1955, an increase of 18,044 million kilowatt hours or 33.1 per cent over the 1951 total of 54,589 million. During the period 1955 to 1959, the firm energy requirement is expected to rise substantially each year to a total of 101,508 million kilowatt hours in 1959, or by 39.8 per cent. By 1959, the energy requirements are forecast to be almost double those in 1951.

Table V - Indicated Reserve (Page 28): The electric utility industry must provide sufficient power to meet demand and to provide for contingencies.

Gross capability for any province may be defined as consisting of net generating capability (hydro plus thermal) plus purchases of firm power under firm obligation from utilities outside the province. Total demand for any province consists of firm power peak load within the province, plus any indicated shortage or rejected load as well as deliveries of firm power to utilities outside the province. In Table V, gross capability is related to total firm demand on the provinces and on Canada. The difference or indicated reserve, expressed as a percentage of total firm demand, shows to what extent productive resources have been able to keep pace with total firm demand in this rapidly growing industry.

For the three years 1951, 1955 and 1959, the indicated reserves in Canada were 621, 1,486 and 2,197 thousand kilowatts, which correspond to reserves of 6.7, 11.9 and 12.8 per cent, respectively, over the total demand in those years. Figures for the various provinces and Canada vary considerably from year to year and are shown in detail in this table.

Charts: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

Chart A - Net Generating Capability within Canada (Page 6 ): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation has increased from 877 thousand kilowatts or 8.9 per cent of the net generating capability within Canada in 1951 to 2,981 thousand kilowatts or 15.4 per cent forecast for 1959.

Chart B - Net Generating Capability within Provinces (Pages 7-8 ): This chart presents for each of the provinces, the information contained in Chart A. It illustrates the comparative importance of thermal and hydro generation within provinces.

Chart C - Net Capability and Firm Demand within Canada (Page 9 ): Chart C provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart D - Net Capability and Firm Demand within Provinces (Pages 10-11 ): The fourth chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement within Canada (Page 12): This is an illustration of the growth in Canadian firm energy requirements by years for the period 1950 to 1959.

## DEFINITIONS

### NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY or SYSTEM with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

### FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

### FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

### NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation less deliveries of firm power under firm obligation.

### FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY or SYSTEM.

### INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

### INDICATED RESERVE

Net capability less indicated demand (+ or -).

### SYSTEM

Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

### UTILITY

The COMPANY, COMMISSION, or UTILITY reporting or included in a SYSTEM report under Section III (which generates at least part of its own power ).



CHART-A

# NET GENERATING CAPABILITY WITHIN CANADA 1950 - 1959

THOUSANDS OF KILOWATTS

20,000

19,000

18,000

17,000

16,000

15,000

14,000

13,000

12,000

11,000

10,000

9,000

8,000

7,000

6,000

5,000

4,000

3,000

2,000

1,000

0

1950

1953

1956

1959

TOTAL

THERMAL

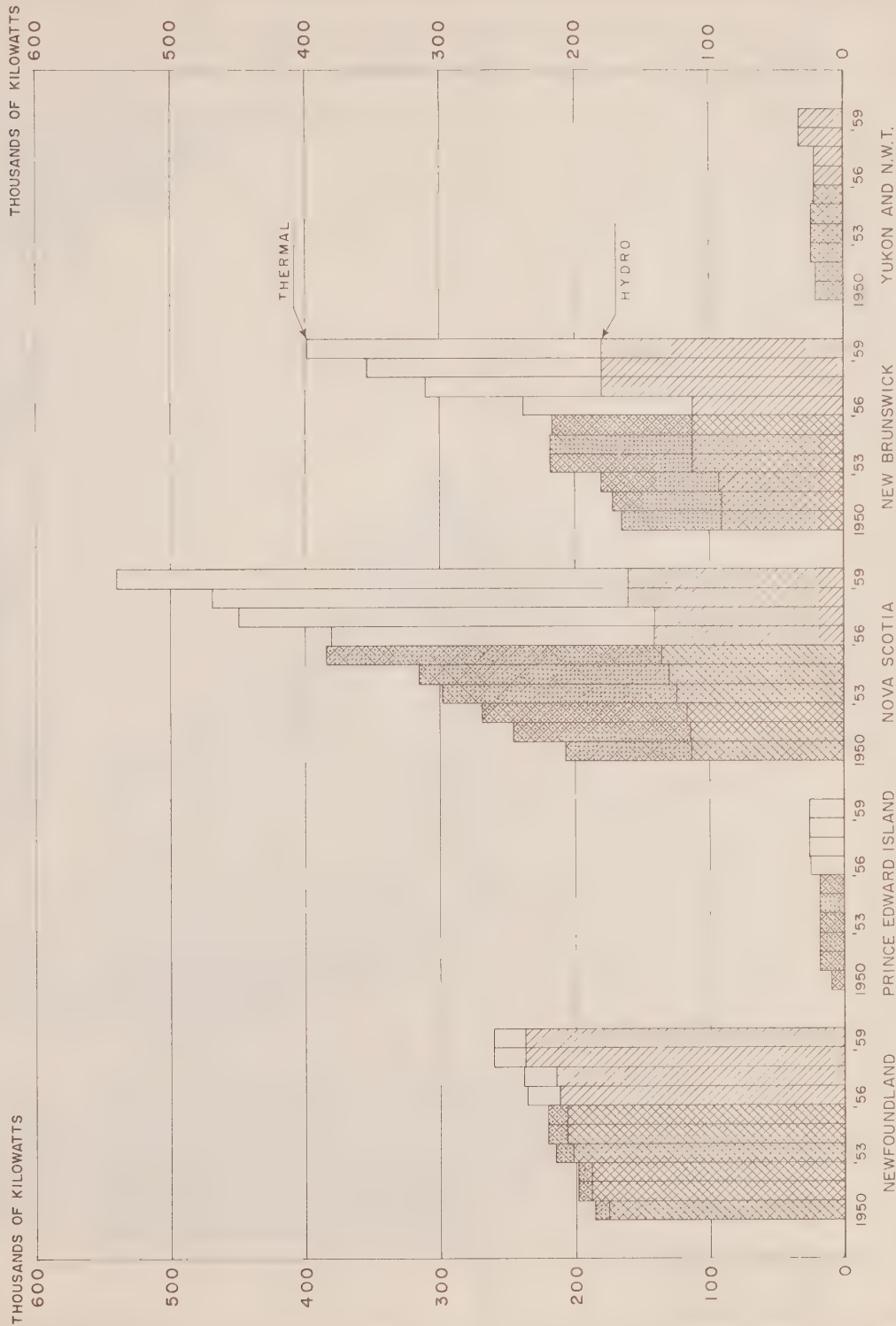
HYDRO

Source: Table I, item 1a plus 1b



# NET GENERATING CAPABILITY WITHIN PROVINCES

1950 — 1959



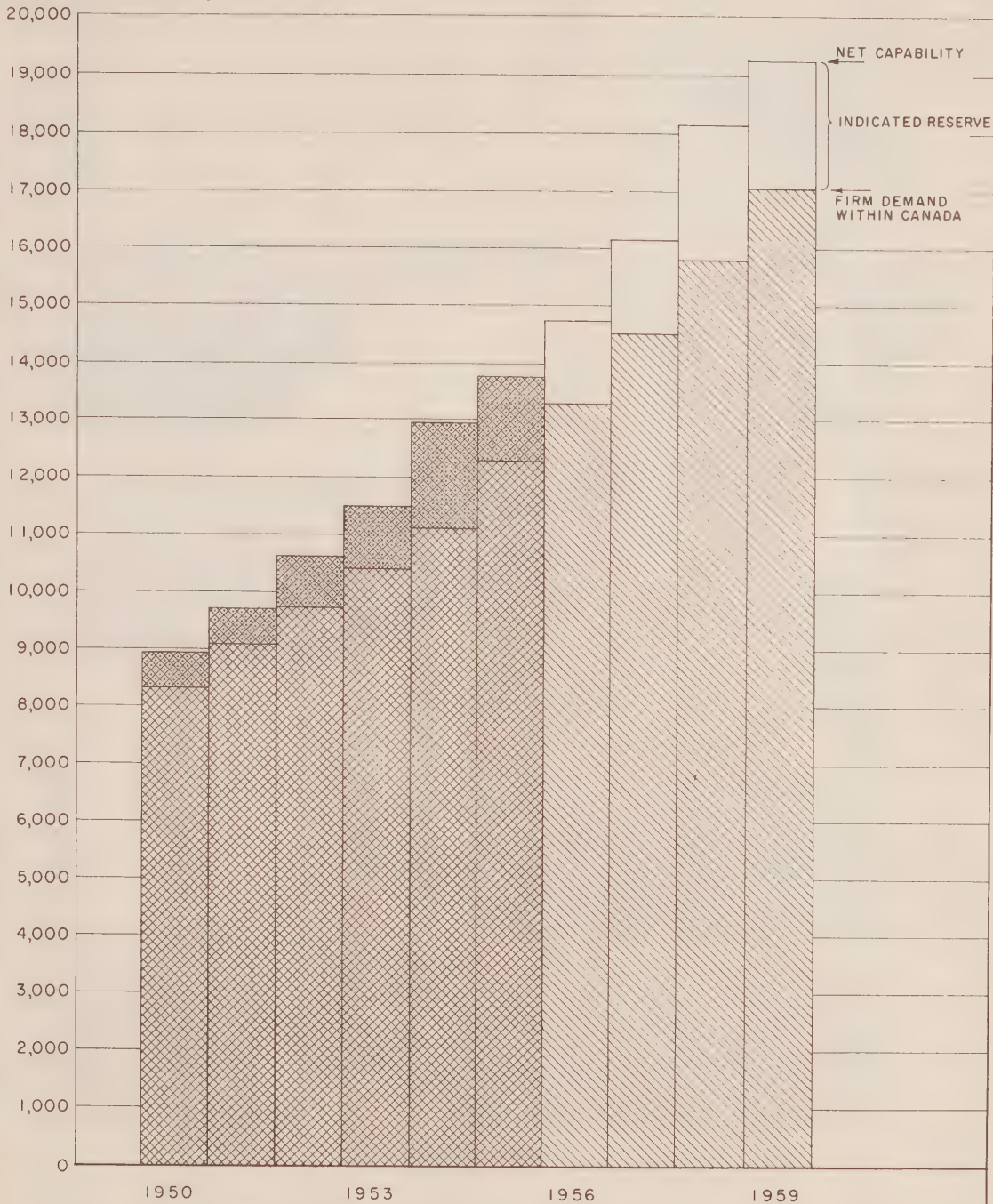
Source: Table I, item la plus lb

CHART - B

CHART - C

# NET CAPABILITY AND FIRM DEMAND WITHIN CANADA 1950 - 1959

THOUSANDS OF KILOWATTS



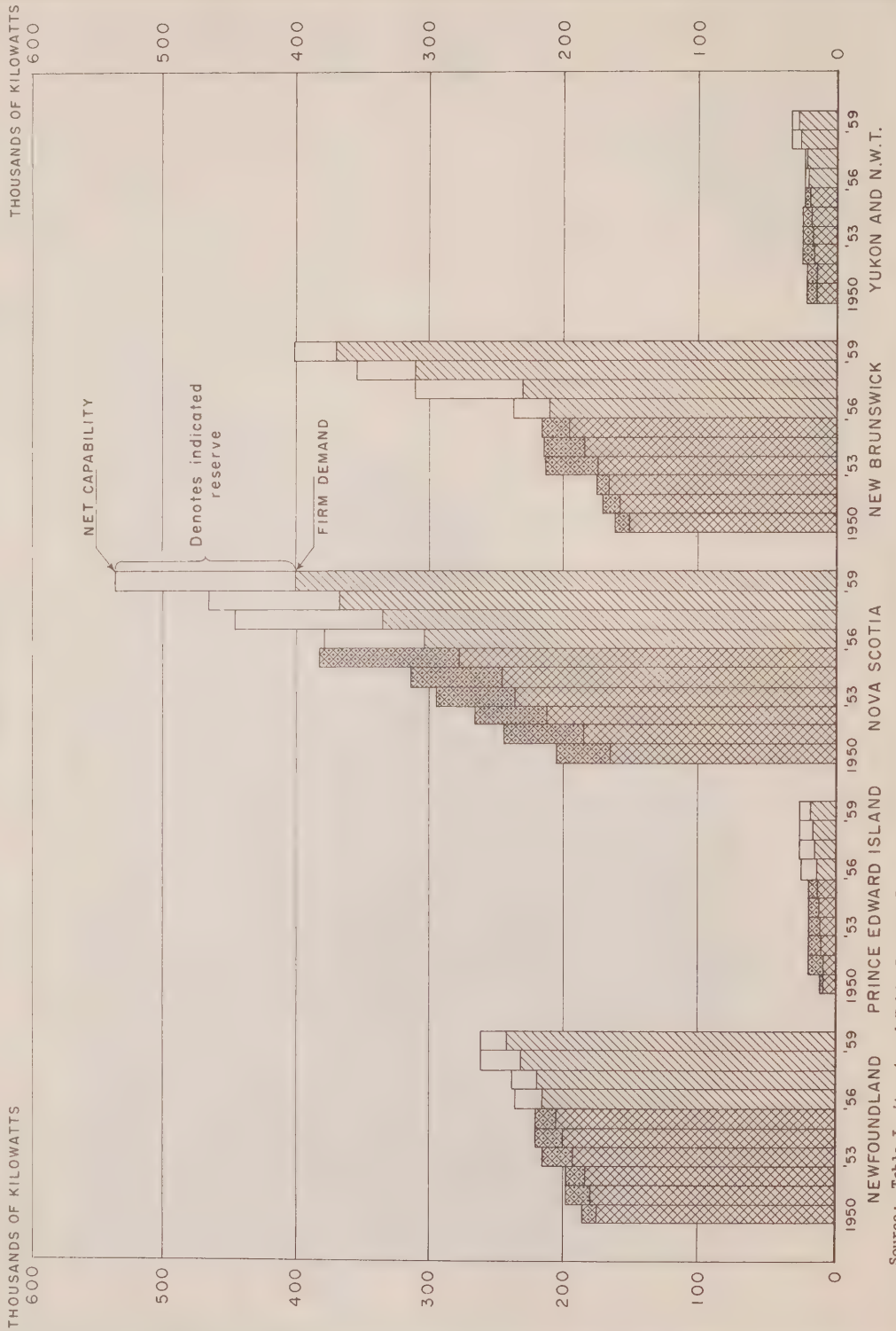
Source: Table I, item 4 and Table I, item 7



CHART - D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950 — 1959

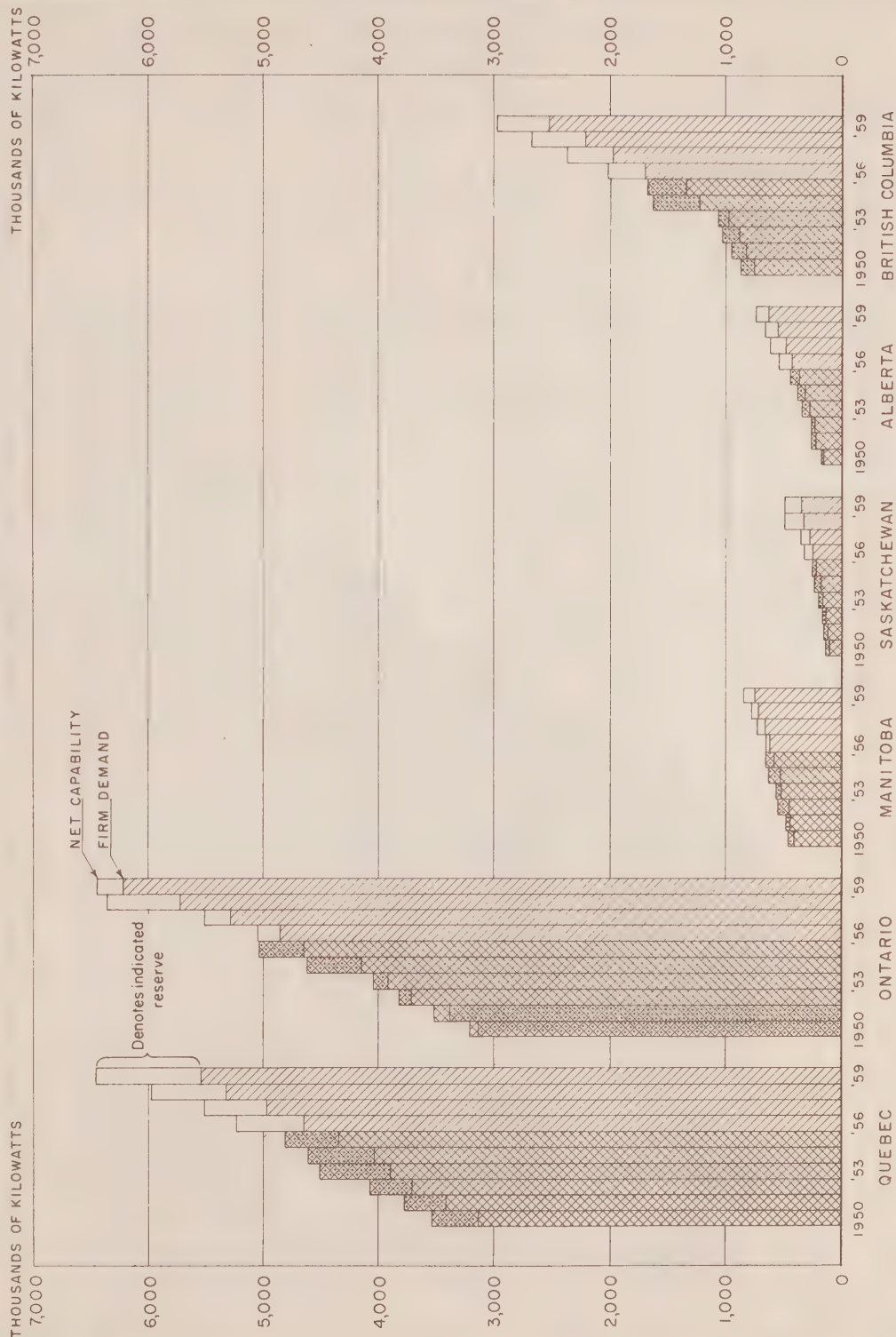


Source: Table I, item 4 and Table I, item 7



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950 - 1959



Source: Table I, item 4 and Table I, item 7

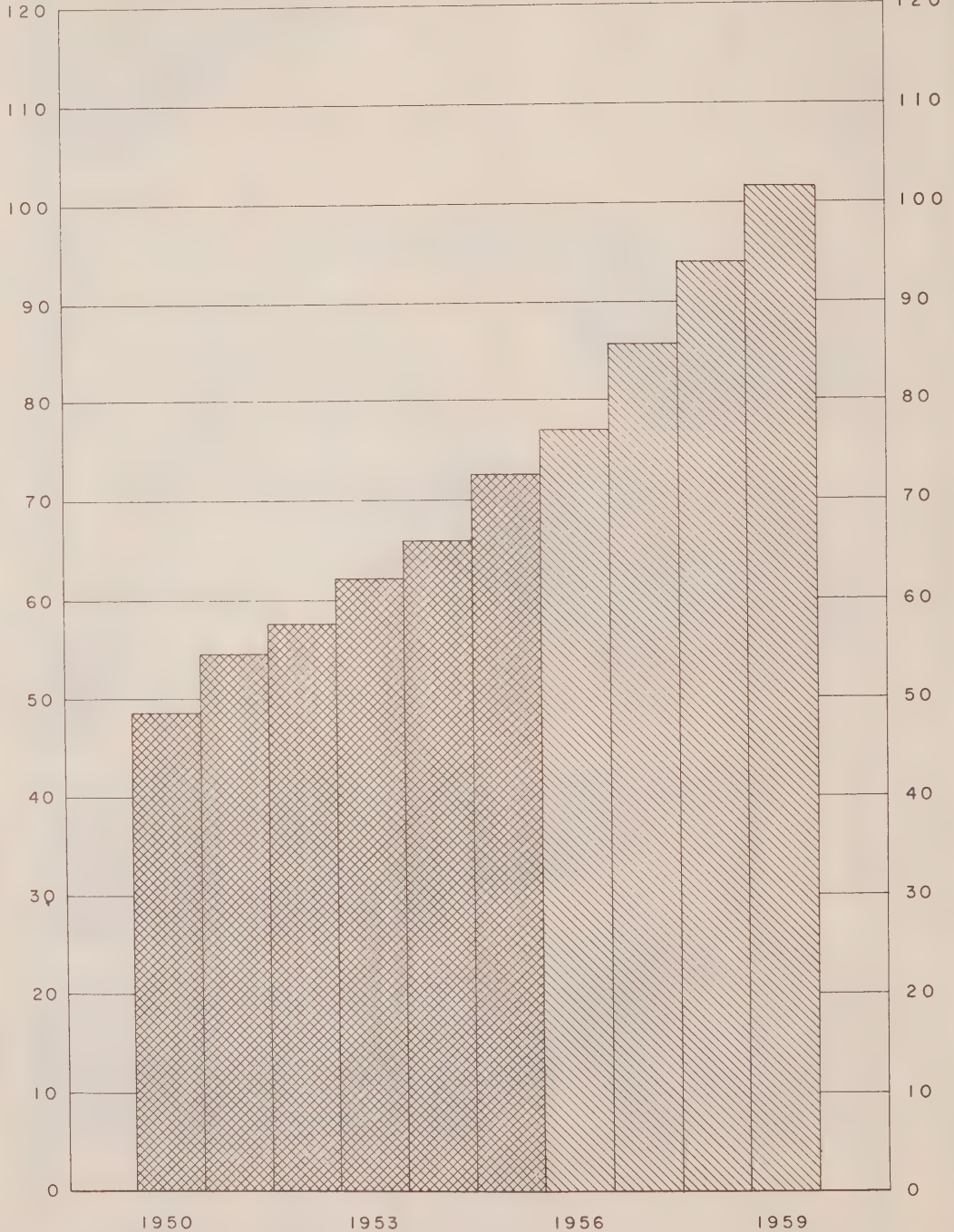
CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA

1950 - 1959

BILLIONS OF KILOWATTHOURS

BILLIONS OF KILOWATTHOURS



Source: Table IV

## SUMMARY - NEWFOUNDLAND

		1950	1951	1952	1953	1954	1955	FORECAST			
								1956	1957	1958	1959
<b>CAPABILITY:</b>											
1. Net Generating Capability:											
	(a) Hydro	176	188	188	202	207	207	212	214	237	237
	(b) Thermal	10	10	10	13	14	14	24	24	24	24
2. Purchases of Firm Power under firm obligation from other utilities:											
	(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
	(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:											
	(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
	(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
4. Net Capability (1 + 2 - 3)											
		186	198	198	215	221	221	236	238	261	261
<b>ACTUAL</b>											
<b>FORECAST</b>											
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Province											
		175	180	184	193	199	204	216	220	232	242
6. Indicated Shortage or Rejection											
		-	-	-	-	1	1	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)											
		175	180	184	193	200	205	216	220	232	242
<b>INDICATED RESERVE:</b>											
	8. Difference (4 - 7)	+ 11	+ 18	+ 14	+ 22	+ 21	+ 16	+ 20	+ 18	+ 29	+ 19
<b>M I L L I O N S O F K I L O W A T T H O U R S</b>											
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm Energy Requirement within Province											
		1,050	1,031	1,147	1,180	1,213	1,277	1,330	1,332	1,425	1,467
10. Indicated Shortage or Rejection											
		-	-	-	-	9	10	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)											
		1,050	1,031	1,147	1,180	1,222	1,287	1,330	1,332	1,425	1,467
12 Deliveries of Firm Energy to other utilities:											
	(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
	(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
	(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-
13. Firm Energy Requirement on the Province (11 + 12)											
		1,050	1,031	1,147	1,180	1,222	1,287	1,330	1,332	1,425	1,467

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - PRINCE EDWARD ISLAND  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability										
(a) Hydro	-	-	-	-	-	-	7	-	-	-
(b) Thermal	10	18	18	18	18	18	25	26	26	26
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
4. Net Capability (1 + 2 - 3)	10	18	18	18	18	18	25	26	26	26
	ACTUAL						FORECAST			
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Province	8	8	9	10	11	12	13	14	15	18
6. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	8	8	9	10	11	12	13	14	15	18
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 2	+ 10	+ 9	+ 8	+ 7	+ 6	+ 12	+ 12	+ 11	+ 8
	MILLIONS OF KILOWATTHOURS									
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	31	34	37	41	46	51	56	63	70	77
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	31	34	37	41	46	51	56	63	70	77
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-
13. Firm Energy Requirement on the Province (11 + 12)	31	34	37	41	46	51	56	63	70	77



TABLE I  
SUMMARY - NOVA SCOTIA  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	113	114	117	124	130	136	141	141	161	161
(b) Thermal	94	132	152	174	186	248	240	308	308	379
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	2	2	2	2	2	2	2	2	2	3
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
4. Net Capability (1 + 2 - 3)	205	244	267	296	314	382	379	447	467	537
	ACTUAL						FORECAST			
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Province	161	183	211	233	243	278	304	336	368	400
6. Indicated Shortage or Rejection	4	2	2	4	3	-	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	165	185	213	237	246	278	304	336	368	400
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 40	+ 59	+ 54	+ 59	+ 68	+ 104	+ 75	+ 111	+ 99	+ 137
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	881	1,017	1,112	1,201	1,267	1,347	1,463	1,593	1,715	1,847
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	881	1,017	1,112	1,201	1,267	1,347	1,463	1,593	1,715	1,847
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	6	6	7	7	7	8	8	9	10	11
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	6	6	7	7	7	8	8	9	10	11
13. Firm Energy Requirement on the Province (11 + 12)	887	1,023	1,119	1,208	1,274	1,355	1,471	1,602	1,725	1,858

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - NEW BRUNSWICK  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	90	90	92	112	112	112	112	180	180	180
(b) Thermal	76	82	88	106	106	105	126	131	174	218
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	2	2	2	2	2	4	5	5	5	7
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	5	4	7	6	5	5	5	5	4	4
(b) Outside Canada										
4. Net Capability (1 + 2 - 3)	163	170	175	214	215	216	238	311	355	401
	ACTUAL						FORECAST			
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Province	151	158	167	175	184	196	211	231	311	371
6. Indicated Shortage or Rejection	-	-	-	-	-	1	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	151	158	167	175	184	197	211	231	311	371
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 12	+ 12	+ 8	+ 39	+ 31	+ 19	+ 27	+ 80	+ 44	+ 30
	MILLIONS OF KILOWATTHOURS									
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	828	886	883	901	1,043	1,021	1,098	1,192	1,658	2,090
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	828	886	883	901	1,043	1,021	1,098	1,192	1,658	2,090
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	41	41	33	36	59	33	40	40	40	40
(c) Total (a + b)	41	41	33	36	59	33	40	40	40	40
13. Firm Energy Requirement on the Province (11 + 12)	869	927	916	937	1,102	1,054	1,138	1,232	1,698	2,130

TABLE I

## SUMMARY - QUEBEC

Thousands of Kilowatts

		1950	1951	1952	1953	1954	1955	FORECAST			
								1956	1957	1958	
CAPABILITY:											
1. Net Generating Capability:											
	(a) Hydro	4,295 9	4,554 9	4,844 11	5,268 11	5,346 12	5,548 13	5,940 13	6,207 15	6,689 15	
	(b) Thermal										
2. Purchases of Firm Power under firm obligation from other utilities:											
	(a) In other Provinces	1	1	1	1	1	1	1	1	1	
	(b) Outside Canada	-	-	-	-	4	5	-	-	-	
3. Deliveries of Firm Power to other utilities:											
	(a) In other Provinces	711	713	713	713	694	696	656	656	657	
	(b) Outside Canada	56	56	56	56	56	56	56	56	56	
4. Net Capability (1 + 2 - 3)											
		3,538	3,795	4,087	4,511	4,613	4,815	5,242	5,511	5,993	
										6,477	
		ACTUAL					FORECAST				
FIRM POWER PEAK LOAD:											
5. Within Province											
		3,123	3,412	3,702	3,895	4,037	4,309	4,651	4,981	5,338	
6. Indicated Shortage or Rejection											
		-	-	-	4	-	44	xxx	xxx	xxx	
7. Indicated Demand within Province (5 + 6)											
		3,123	3,412	3,702	3,899	4,037	4,353	4,651	4,981	5,338	
										5,550	
INDICATED RESERVE:											
	8. Difference (4 - 7)	+ 415	+ 383	+ 385	+ 612	+ 576	+ 462	+ 591	+ 530	+ 655	
										+ 927	
		MILLIONS					KILOWATTHOURS				
FIRM ENERGY REQUIREMENT:											
9. Firm Energy Requirement within Province											
		20,155	22,905	24,197	26,439	27,676	29,196	29,527	32,665	35,144	
		123	215	37	1	1	362	xxx	xxx	xxx	
										xxx	
10. Indicated Shortage or Rejection											
11. Indicated Firm Energy Requirement within Province (9 + 10)											
		20,278	23,120	24,234	26,440	27,677	29,558	29,527	32,665	35,144	
										36,725	
12. Deliveries of Firm Energy to other utilities:											
	(a) In other Provinces	4,287	4,288	4,304	4,272	4,155	4,049	3,949	4,019	4,026	
	(b) Outside Canada	820	834	821	825	848	490	500	500	500	
(c) Total (a + b)											
		5,107	5,122	5,125	5,097	5,003	4,539	4,449	4,519	4,526	
										4,528	
13. Firm Energy Requirement on the Province (11 + 12)											
		25,385	28,242	29,359	31,537	32,680	34,097	33,976	37,184	39,670	
										41,253	

## SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

## SUMMARY - ONTARIO

Thousands of kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	2,349	2,458	2,654	2,666	3,463	3,669	3,724	4,176	4,855	4,888
(b) Thermal	127	276	518	726	524	717	712	711	928	928
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	720	722	722	722	707	708	667	667	653	653
(b) Outside Canada	21	22	23	24	25	33	36	38	39	44
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	1	1	1	1	1	1	1	1	1	1
(b) Outside Canada	85	85	85	85	85	85	85	85	85	40
4. Net Capability (1 + 2 - 3)	3,131	3,392	3,831	4,052	4,633	5,041	5,053	5,506	6,389	6,472
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Province	2,988	3,202	3,713	3,868	4,160	4,655	4,884	5,297	5,726	6,231
6. Indicated Shortage or Rejection	213	319	1	60	-	18	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	3,201	3,521	3,714	3,928	4,160	4,673	4,884	5,297	5,726	6,231
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	- 70	- 129	+ 117	+ 124	+ 473	+ 368	+ 169	+ 209	+ 663	+ 241
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	17,274	19,681	20,916	22,211	23,184	25,589	27,240	29,614	32,102	34,860
10. Indicated Shortage or Rejection	255	97	9	2	1	6	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	17,529	19,778	20,925	22,213	23,185	25,595	27,240	29,614	32,102	34,860
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	2	3	3	3	3	3	4	4	4	4
(b) Outside Canada	703	703	690	668	624	687	690	689	689	502
(c) Total (a + b)	705	706	693	671	627	690	694	693	693	506
13. Firm Energy Requirement on the Province (11 + 12)	18,234	20,484	21,618	22,884	23,812	26,285	27,934	30,307	32,795	35,366



TABLE I  
SUMMARY - MANITOBA  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	418	413	487	487	522	547	547	547	547	547
(b) Thermal	10	10	10	23	46	46	46	106	166	226
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	68	77	79	79	80	79	80	80	80	80
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	9	9	9	9	13	14	14	14	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
4. Net Capability (1 + 2 - 3)	487	491	567	580	635	658	659	719	793	853
<b>ACTUAL</b>										
<b>FIRM POWER PEAK-LOAD:</b>										
5. Within Province	419	454	460	512	533	594	629	663	708	740
6. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	419	454	460	512	533	594	629	663	708	740
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 68	+ 37	+ 107	+ 68	+ 102	+ 64	+ 30	+ 56	+ 85	+ 113
<b>MILLIONS OF KILOWATTHOURS</b>										
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	2,216	2,427	2,526	2,670	2,852	3,086	3,271	3,471	3,681	4,021
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	2,216	2,427	2,526	2,670	2,852	3,086	3,271	3,471	3,681	4,021
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	79	79	79	79	114	114	114	114	114	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	79	79	79	79	114	114	114	114	114	-
13. Firm Energy Requirement on the Province (11 + 12)	2,295	2,506	2,605	2,749	2,966	3,200	3,385	3,585	3,795	4,021

# SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - SASKATCHEWAN  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
1. Net Generating Capability:										
(a) Hydro	85	85	85	85	85	82	82	82	82	82
(b) Thermal	125	157	168	193	239	253	323	373	497	497
2. Purchases of Firm Power under firm obligation from other utilities										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	68	77	79	79	80	79	80	80	80	80
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
Net Capability ( 1 + 2 - 3 )	142	165	174	199	244	256	325	375	499	499
	ACTUAL					FORECAST				
FIRM POWER PEAK LOAD:										
5. Within Province	107	116	134	159	187	220	250	282	317	353
6. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated Demand within Province ( 5 + 6 )	107	116	134	159	187	220	250	282	317	353
INDICATED RESERVE:										
8. Difference ( 4 - 7 )	+ 35	+ 49	+ 40	+ 40	+ 57	+ 36	+ 75	+ 93	+ 182	+ 146
	MILLIONS OF KILOWATTHOURS									
FIRM ENERGY REQUIREMENT:										
9. Firm Energy Requirement within Province	405	467	550	629	742	877	1,024	1,178	1,340	1,467
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province ( 9 + 10 )	405	467	550	629	742	877	1,024	1,178	1,340	1,467
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	500	515	542	559	558	571	571	571	571	571
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
(c) Total ( a + b )	500	515	542	559	558	571	571	571	571	571
13. Firm Energy Requirement on the Province ( 11 + 12 )	905	982	1,092	1,188	1,300	1,448	1,595	1,749	1,911	2,038

## SUMMARY - ALBERTA

		1950	1951	1952	1953	1954	1955	F O R E C A S T			
								1956	1957	1958	1959
<b>CAPABILITY:</b>											
1. Net Generating Capability:											
(a) Hydro	83	162	162	162	162	202	220	220	237	237	304
(b) Thermal	108	109	119	187	193		236	332	380	436	436
2. Purchases of Firm Power under firm obligation from other utilities:											
(a) In other Provinces	-	-	-	-	-	4	-	-	3	2	1
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:											
(a) In other Provinces	3	5	7	8	-	-	3	7	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-	-
4. Net Capability (1 + 2 - 3)	188	266	274	341	399	453		545	620	675	741
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Province	176	220	233	284	310	389		436	493	555	630
6. Indicated Shortage or Rejection	-	-	-	-	-	-		xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	176	220	233	284	310	389		436	493	555	630
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 12	+ 46	+ 41	+ 57	+ 89	+ 64		+ 109	+ 127	+ 120	+ 111
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm Energy Requirement within Province	1,023	1,114	1,167	1,372	1,571	1,838		2,030	2,277	2,552	2,869
10. Indicated Shortage or Rejection	-	-	-	-	-	-		xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	1,023	1,114	1,167	1,372	1,571	1,838		2,030	2,277	2,552	2,869
12. Deliveries of Firm Energy to other utilities:											
(a) In other Provinces	14	20	30	6	-	-		2	-	-	-
(b) Outside Canada	-	-	-	-	-	-		-	-	-	-
(c) Total (a + b)	14	20	30	6	-	-		2	-	-	-
13. Firm Energy Requirement on the Province (11 + 12)	1,037	1,134	1,197	1,378	1,571	1,838		2,032	2,277	2,552	2,869

### CAPABILITY:

### 1. Net Generating Capability:

(2) Hydro

Thermal

2. Purchases of Firm Power under firm obligation from other utilities:

(a) In other Provinces

(b) Outside Canada

### 3. Deliveries of Firm Power to other utilities:

(a) In other Provinces

(b) Outside Canada

#### 4. Net Capability ( $1 + 2 - 3$ )

**FIRM POWER PEAK LOAD:**

### 5. Within Province

### 6. Indicated Shortage or Rejection

7. Indicated Demand within Province  
(5 + 6)

INDICATED RESERVE:

8. Difference ( 4 - 7 )

**FIRM ENERGY REQUIREMENT:**

### 9. Firm Energy Requirement within Province

0. Indicated Shortage or Rejection

1. Indicated Firm Energy Requirements within Province ( 9 + 10 )

2. Deliveries of Firm Energy to other utilities:

(a) In other Provinces

(b) Outside Canada

(c) Total  $(a + b)$ 

### 3. Firm Energy Requirement on the Province (11 + 12)

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - BRITISH COLUMBIA  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	850	905	966	999	1,574	1,610	1,895	2,239	2,466	2,752
(b) Thermal	72	74	80	96	98	102	111	155	229	232
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	3	5	7	8	-	3	7	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	-	-	-	-	4	-	-	3	2	1
(b) Outside Canada	30	30	30	30	30	20	-	-	-	-
4. Net Capability (1 + 2 - 3)	895	954	1,023	1,073	1,638	1,695	2,013	2,391	2,693	2,983
	ACTUAL						FORECAST			
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Province	773	825	895	974	1,239	1,351	1,702	1,991	2,219	2,523
6. Indicated Shortage or Rejection	-	-	-	12	-	-	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	773	825	895	986	1,239	1,351	1,702	1,991	2,219	2,523
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 122	+ 129	+ 128	+ 87	+ 399	+ 344	+ 311	+ 400	+ 474	+ 460
	MILLIONS OF KILOWATTHOURS									
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	4,437	4,651	4,889	5,358	6,284	7,877	9,813	12,169	14,163	15,958
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	4,437	4,651	4,889	5,358	6,284	7,877	9,813	12,169	14,163	15,958
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	-	-	-	-	10	10	10	10	11	11
(b) Outside Canada	184	184	184	184	184	122	-	-	-	-
(c) Total (a + b)	184	184	184	184	194	132	10	10	11	11
13. Firm Energy Requirement on the Province (11 + 12)	4,621	4,835	5,073	5,542	6,478	8,009	9,823	12,179	14,174	15,969



TABLE I  
SUMMARY - YUKON & NORTH WEST TERRITORIES  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	21	21	24	24	24	22	22	22	33	33
(b) Thermal	-	-	-	-	-	-	-	-	-	-
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
4. Net Capability (1 + 2 - 3)	21	21	24	24	24	22	22	22	33	33
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Province	14	14	16	17	18	19	20	21	26	28
6. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated Demand within Province (5 + 6)	14	14	16	17	18	19	20	21	26	28
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 7	+ 7	+ 8	+ 7	+ 6	+ 3	+ 2	+ 1	+ 7	+ 5
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Province	67	64	66	83	89	96	99	99	120	127
10. Indicated Shortage or Rejection	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Province (9 + 10)	67	64	66	83	89	96	99	99	120	127
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-
13. Firm Energy Requirement on the Province (11 + 12)	67	64	66	83	89	96	99	99	120	127

TABLE I  
SUMMARY - CANADA  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST			
							1956	1957	1958	1959
<b>CAPABILITY:</b>										
1. Net Generating Capability:										
(a) Hydro	8,480	8,990	9,619	10,129	11,665	12,153	12,895	14,045	15,487	16,358
(b) Thermal	641	877	1,174	1,547	1,436	1,752	1,952	2,229	2,803	2,981
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	21	22	23	24	29	38	36	38	39	44
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	176	175	178	177	176	166	146	146	145	100
4. Net Capability (1 + 2 - 3)	8,966	9,714	10,638	11,523	12,954	13,777	14,737	16,166	18,184	19,283
<b>ACTUAL</b>										
<b>FIRM POWER PEAK LOAD:</b>										
5. Within Canada	8,095	8,772	9,724	10,320	11,121	12,227	13,316	14,529	15,815	17,086
6. Indicated Shortage or Rejection	217	321	3	80	4	64	xxx	xxx	xxx	xxx
7. Indicated Demand within Canada (5 + 6)	8,312	9,093	9,727	10,400	11,125	12,291	13,316	14,529	15,815	17,086
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 654	+ 621	+ 911	+ 1,123	+ 1,829	+ 1,486	+ 1,421	+ 1,637	+ 2,369	+ 2,197
<b>M I L L I O N S O F K I L O W A T T H O U R S</b>										
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm Energy Requirement within Canada	48,367	54,277	57,490	62,085	65,967	72,255	76,951	85,653	93,970	101,508
10. Indicated Shortage or Rejection	378	312	46	3	11	378	xxx	xxx	xxx	xxx
11. Indicated Firm Energy Requirement within Canada (9 + 10)	48,745	54,589	57,536	62,088	65,978	72,633	76,951	85,653	93,970	101,508
<b>DELIVERIES OF FIRM ENERGY TO OTHER UTILITIES:</b>										
(a) In other Provinces	-	-	-	-	-	-	-	-	-	-
(b) Outside Canada	1,748	1,762	1,728	1,713	1,715	1,332	1,230	1,229	1,229	1,042
(c) Total (a + b)	1,748	1,762	1,728	1,713	1,715	1,332	1,230	1,229	1,229	1,042
13. Firm Energy Requirement on Canada (11 + 12)	50,493	56,351	59,264	63,801	67,693	73,965	78,181	86,882	95,199	102,550

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE II

NET GENERATING CAPABILITY WITHIN PROVINCES\*

Thousands of Kilowatts

P R O V I N C E	1950	1951	1952	1953	1954	1955	F O R E C A S T				P E R C E N T A G E   C H A N G E		
							1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959
Newfoundland	186	198	198	215	221	221	236	238	261	261	11.6	18.1	31.8
Prince Edward Island	10	18	18	18	18	18	25	26	26	26	0.0	44.4	44.4
Nova Scotia	207	246	269	298	316	384	381	449	469	540	56.1	40.6	119.5
New Brunswick	166	172	180	218	218	217	238	311	354	398	26.2	83.4	131.4
Quebec	4,304	4,563	4,855	5,279	5,358	5,561	5,953	6,222	6,704	7,189	21.9	29.3	57.5
Ontario	2,476	2,734	3,172	3,392	3,987	4,386	4,436	4,887	5,783	5,816	60.4	32.6	112.7
Manitoba	428	423	497	510	568	593	593	653	713	773	40.2	30.4	82.7
Saskatchewan	210	242	253	278	324	335	405	455	579	579	38.4	72.8	139.3
Alberta	191	271	281	349	395	456	552	617	673	740	68.3	62.3	173.1
British Columbia	922	979	1,046	1,095	1,672	1,712	2,006	2,394	2,695	2,984	74.9	74.3	204.8
Yukon and N. W. T.	21	21	24	24	24	22	22	22	33	33	4.8	50.0	57.1
Canada	9,121	9,867	10,793	11,676	13,101	13,905	14,847	16,274	18,290	19,339	40.9	39.1	96.0

\* Hydro plus thermal (Table I, item 1 a + 1 b)

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES\*

Thousands of Kilowatts

P R O V I N C E	F O R E C A S T										P E R C E N T A G E   C H A N G E		
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959
Newfoundland	175	180	184	193	200	205	216	220	232	242	13.9	18.0	34.4
Prince Edward Island	8	8	9	10	11	12	13	14	15	18	50.0	50.0	125.0
Nova Scotia	165	185	213	237	246	278	304	336	368	400	50.3	43.9	116.2
New Brunswick	151	158	167	175	184	197	211	231	311	371	24.7	88.3	134.8
Quebec	3,123	3,412	3,702	3,899	4,037	4,353	4,651	4,981	5,338	5,550	27.6	27.5	62.7
Ontario	3,201	3,521	3,714	3,928	4,160	4,673	4,884	5,297	5,726	6,231	32.7	33.3	77.0
Manitoba	419	454	460	512	533	594	629	663	708	740	30.8	24.6	63.0
Saskatchewan	107	116	134	159	187	220	250	282	317	353	89.7	60.5	204.3
Alberta	176	220	233	284	310	389	436	493	555	630	76.8	62.0	186.4
British Columbia	773	825	895	986	1,239	1,351	1,702	1,991	2,219	2,523	63.8	86.8	205.8
Yukon and N. W. T.	14	14	16	17	18	19	20	21	26	28	35.7	47.4	100.0
Canada	8,312	9,093	9,727	10,400	11,125	12,291	13,316	14,529	15,815	17,086	35.2	39.0	87.9

\* Indicated Firm Demand (Table 1, item 7)



SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE IV

FIRM ENERGY REQUIREMENT WITHIN PROVINCES\*

Millions of Kilowatt Hours

P R O V I N C E	A C T U A L						F O R E C A S T				P E R C E N T A G E   C H A N G E		
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959
Newfoundland	1,050	1,031	1,147	1,180	1,222	1,287	1,330	1,332	1,425	1,467	24.8	14.0	42.3
Prince Edward Island	31	34	37	41	46	51	56	63	70	77	50.0	51.0	126.5
Nova Scotia	881	1,017	1,112	1,201	1,267	1,347	1,463	1,593	1,715	1,847	32.4	37.1	81.6
New Brunswick	828	886	883	901	1,043	1,021	1,098	1,192	1,658	2,090	15.2	104.7	135.9
Quebec	20,278	23,120	24,234	26,440	27,677	29,558	29,527	32,665	35,144	36,725	27.8	24.2	58.8
Ontario	17,529	19,778	20,925	22,213	23,185	25,595	27,240	29,614	32,102	34,860	29.4	36.2	76.3
Manitoba	2,216	2,427	2,526	2,670	2,852	3,086	3,271	3,471	3,681	4,021	27.2	30.3	65.7
Saskatchewan	405	467	550	629	742	877	1,024	1,178	1,340	1,467	87.8	67.3	214.1
Alberta	1,023	1,114	1,167	1,372	1,571	1,838	2,030	2,277	2,552	2,869	65.0	56.1	157.5
British Columbia	4,437	4,651	4,889	5,358	6,284	7,877	9,813	12,169	14,163	15,958	69.4	102.6	243.1
Yukon and N. W. T.	67	64	66	83	89	96	99	99	120	127	50.0	32.3	98.4
Canada	48,745	54,589	57,536	62,088	65,978	72,633	76,951	85,653	93,970	101,508	33.1	39.8	85.9

\* Table I, item 11

## SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	FORECAST				1951-1955	1955-1959	1951-1959
<b>Newfoundland</b>													
1. Gross Capability	186	198	198	215	221	221	236	238	261	261	11.6	18.1	31.8
2. Total Firm Demand on the Province	175	180	184	193	200	205	216	220	232	242	13.9	18.0	34.4
3. Indicated Reserve (1 - 2)	11	18	14	22	21	16	20	18	29	19	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	6.3	10.0	7.6	11.4	10.5	7.8	9.3	8.2	12.5	7.9	xxx	xxx	xxx
<b>Prince Edward Island</b>													
1. Gross Capability	10	18	18	18	18	18	25	26	26	26	0.0	44.4	44.4
2. Total Firm Demand on the Province	8	8	9	10	11	12	13	14	15	18	50.0	50.0	125.0
3. Indicated Reserve (1 - 2)	2	10	9	8	7	6	12	12	11	8	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	25.0	125.0	100.0	80.0	63.6	50.0	92.3	85.7	73.3	44.4	xxx	xxx	xxx
<b>Nova Scotia</b>													
1. Gross Capability	207	246	269	298	316	384	381	449	469	540	56.1	40.6	119.5
2. Total Firm Demand on the Province	167	187	215	239	248	280	306	338	370	403	49.7	43.9	115.5
3. Indicated Reserve (1 - 2)	40	59	54	59	68	104	75	111	99	137	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	24.0	31.6	25.1	24.7	27.4	37.1	24.5	32.8	26.8	34.0	xxx	xxx	xxx
<b>New Brunswick</b>													
1. Gross Capability	168	174	182	220	220	221	243	316	359	405	27.0	83.3	132.8
2. Total Firm Demand on the Province	156	162	174	181	189	202	216	236	315	375	24.7	85.6	131.5
3. Indicated Reserve (1 - 2)	12	12	8	39	31	19	27	80	44	30	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	7.7	7.4	4.6	21.5	16.4	9.4	12.5	33.9	14.0	8.0	xxx	xxx	xxx

\* Gross Capability (Table I, item 1 + 2) Less Total Firm Demand on the Provinces (Table I, item 7 + 3)

## SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	F O R E C A S T				1951- 1955	1955- 1959	PERCENTAGE CHANGE 1951- 1959
<u>Quebec</u>													
1. Gross Capability	4,305	4,564	4,856	5,280	5,363	5,567	5,954	6,223	6,705	7,190	22.0	29.2	57.5
2. Total Firm Demand on the Province	3,890	4,181	4,471	4,668	4,787	5,105	5,363	5,693	6,050	6,263	22.1	22.7	49.8
3. Indicated Reserve (1 - 2)	415	383	385	612	576	462	591	530	655	927	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	10.7	9.2	8.6	13.1	12.0	9.0	11.0	9.3	10.8	14.8	xxx	xxx	xxx
<u>Ontario</u>													
1. Gross Capability	3,217	3,478	3,917	4,138	4,719	5,127	5,139	5,592	6,475	6,513	47.4	27.0	87.3
2. Total Firm Demand on the Province	3,287	3,607	3,800	4,014	4,246	4,759	4,970	5,383	5,812	6,272	31.9	31.8	73.9
3. Indicated Reserve (1 - 2)	- 70	- 129	117	124	473	368	169	209	663	241	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	-	-	3.1	3.1	11.1	7.7	3.4	3.9	11.4	3.8	xxx	xxx	xxx
<u>Manitoba</u>													
1. Gross Capability	496	500	576	589	648	672	673	733	793	853	34.4	26.9	70.6
2. Total Firm Demand on the Province	428	463	469	521	546	608	643	677	708	740	31.3	21.7	59.8
3. Indicated Reserve (1 - 2)	68	37	107	68	102	64	30	56	85	113	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	15.9	8.0	22.8	13.1	18.7	10.5	4.7	8.3	12.0	15.3	xxx	xxx	xxx
<u>Saskatchewan</u>													
1. Gross Capability	210	242	253	278	324	335	405	455	579	579	38.4	72.8	139.3
2. Total Firm Demand on the Province	175	193	213	238	267	299	330	362	397	433	54.9	44.8	124.4
3. Indicated Reserve (1 - 2)	35	49	40	40	57	36	75	93	182	146	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	20.0	25.4	18.8	16.8	21.3	12.0	22.7	25.7	45.8	33.7	xxx	xxx	xxx

\* Gross Capability (Table I, item 1 + 2) Less Total Firm Demand on the Provinces (Table I, item 7 + 3)

## SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

	F O R E C A S T							P E R C E N T A G E   C H A N G E					
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	
Alberta													
1. Gross Capability	191	271	281	349	399	456	552	620	675	741	68.3	62.5	173.4
2. Total Firm Demand on the Province	179	225	240	292	310	392	443	493	555	630	74.2	60.7	180.0
3. Indicated Reserve (1 - 2)	12	46	41	57	89	64	109	127	120	111	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	6.7	20.4	17.1	19.5	28.7	16.3	24.6	25.8	21.6	17.6	xxx	xxx	xxx
British Columbia													
1. Gross Capability	925	984	1,053	1,103	1,672	1,715	2,013	2,394	2,695	2,984	74.3	74.0	203.3
2. Total Firm Demand on the Province	803	855	925	1,016	1,273	1,371	1,702	1,994	2,221	2,524	60.4	84.1	195.2
3. Indicated Reserve (1 - 2)	122	129	128	87	399	344	311	400	474	460	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	15.2	15.1	13.8	8.6	31.3	25.1	18.3	20.1	21.3	18.2	xxx	xxx	xxx
Yukon and N. W. T.													
1. Gross Capability	21	21	24	24	24	22	22	22	33	33	4.8	50.0	57.1
2. Total Firm Demand on the Province	14	14	16	17	18	19	20	21	26	28	35.7	47.4	100.0
3. Indicated Reserve (1 - 2)	7	7	8	7	6	3	2	1	7	5	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	50.0	50.0	50.0	41.2	33.3	15.8	10.0	4.8	26.9	17.9	xxx	xxx	xxx
Canada													
1. Gross Capability	9,142	9,889	10,816	11,700	13,130	13,943	14,883	16,312	18,329	19,383	41.0	39.0	96.0
2. Total Firm Demand on Canada	8,488	9,268	9,905	10,577	11,301	12,457	13,462	14,675	15,960	17,186	34.4	38.0	85.4
3. Indicated Reserve (1 - 2)	654	621	911	1,123	1,829	1,486	1,421	1,637	2,369	2,197	xxx	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	7.7	6.7	9.2	10.6	16.2	11.9	10.6	11.2	14.8	12.8	xxx	xxx	xxx

\* Gross Capability (Table I, item 1 + 2) Less Total Firm Demand on the Provinces (Table I, item 7 + 3)



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The Canadian Electrical Association Statistical Policy Committee serves as an over-all co-ordinating agency for these surveys - the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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The function of an Area Representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey. For this reason Area Representatives must have the complete co-operation of Company representatives in securing the information required for the power survey.













CANADA

*Third*  
**ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD**

**March, 1957**



**DOMINION BUREAU OF STATISTICS**

**Public Finance and Transportation Division**

**Transportation and Public Utilities Section**

57-  
204





DOMINION BUREAU OF STATISTICS  
Public Finance and Transportation Division  
Transportation and Public Utilities Section

*Third*  
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**March, 1957**

*Published by Authority of*  
**The Right Honourable C. D. Howe, Minister of Trade and Commerce**

## TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Review of Survey Results	2
Definitions	5
Chart A: Net Generating Capability within Canada, 1950 through 1960	6
Chart B: Net Capability and Firm Demand within Canada, 1950 through 1960	7
Chart C: Net Generating Capability within Provinces, 1950 through 1960	9
Chart D: Net Capability and Firm Demand within Provinces, 1950 through 1960	10
Chart E: Firm Energy Requirement within Canada, 1950 through 1960	12
Table I: Summary by Provinces and Canada, 1950 through 1960	13
Table II: Net Generating Capability within Provinces, 1950 through 1960	25
Table III: Firm Power Peak Load within Provinces, 1950 through 1960	26
Table IV: Firm Energy Requirement within Provinces, 1950 through 1960	27
Table V: Indicated Reserve, 1950 through 1960	28
Canadian Electrical Association Statistical Policy Committee	31
Electric Power Survey Committee	32

## Introduction

This report presents the results of the third annual Electric Power Survey of Capability and Load which was conducted in March, 1957 by the Dominion Bureau of Statistics in co-operation with the Canadian Electrical Association. The 108 electric power producers covered by this survey include all major private and publicly - operated electric utilities and certain other power-producing companies. These 108 electric power producers generated approximately 93% of the total kilowatt hours produced in the country. The figures contained in this report can, therefore, be regarded as representative of the whole electric power industry in Canada. In some provinces, however, the percentage coverage is considerably lower than for the country as a whole.

Previous surveys incorporated only those major power-producing companies which sold part of their generation to the public. However, this year all power producers of 10,000,000 kilowatt hours or over were included in the survey regardless of whether they sold any energy. For comparative purposes, figures back to 1950, have been amended to include these additional companies.

Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load. Throughout the report, the full amount of contractual commitments for firm power is reported.

Net generating capability, as shown in the tables, is the output of generating facilities after deducting station service. It is based on actual operating experience assuming all equipment available at the time of the annual firm power peak load with no deduction for equipment not operating at that time, and with no allowance made for the effect of unfavourable water and ice conditions. Net generating capability should not be construed as representing the total installed capacity of the facilities on the basis of name-plate ratings.

For the years 1950 to 1956, the net generating capability is shown for installations actually in existence during the month in which the firm power peak load occurred. For the years 1957 to 1960 it is forecast by adding new installations to the 1956 capability and deducting units retired.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table 1) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means generating capability plus purchases outside the province less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

### Review of Survey Results

#### Summary:

Net Generating Capability: The generating capability of Canada in 1956 amounted to 14,983,000 kilowatts, an increase of 5.9 per cent over the 1955 total of 14,147,000 kilowatts. The generating capability is expected to be 22,111,000 kilowatts in 1960, an increase of 47.6 per cent over 1956. The proportion of thermal generation to the total is expected to rise from 14.3 per cent in 1955 to 19.5 per cent in 1959.

Firm Power Peak Load: The firm power peak load or demand within Canada amounted to 13,917,000 kilowatts in 1956, an increase of 11.0 per cent over the 1955 total of 12,536,000 kilowatts. By 1960 the load is forecast to rise 36.8 per cent to 19,040,000 kilowatts.

Indicated Reserve: The indicated reserve in Canada in 1956 was 1,008,000 kilowatts and is expected to be 3,011,000 kilowatts in 1960.

Firm Energy Requirement: The indicated firm energy requirement in Canada was 82,679,000,000 kilowatt hours in 1956, an increase of 11.7 per cent over the 1955 total of 74,032,000,000 kilowatt hours. It is expected to climb to 114,365,000,000 kilowatt hours in 1960 or by 37.6 per cent.

Table 1 - Summary (Pages 13 to 24): This table presents the information which was collected from each of the 108 producers of power included in the survey, summarized for each of the provinces and for Canada. It shows the capability, firm power peak load, indicated reserve, and firm energy requirements.

Table II - Net Generating Capability Within Provinces (Page 25): The growth in net generating capability as illustrated in Table II is quite impressive. During the four-year period 1952-1956 the growth for Canada as a whole amounted to 3,979,000 kilowatts or 36.2 per cent over the 1952 total. The indicated



growth of 47.6 per cent during the forecast period 1956 to 1960 represents an additional 7,128,000 kilowatts of net generating capability. The total growth, both actual and planned over the period 1952 to 1960, is 101 per cent.

Although the forecast of net generating capability for Canada as a whole shows an increase of 101 per cent for the period 1952 to 1960, it varies considerably for the several provinces from a low of 48.0 per cent for Newfoundland to 258.4 per cent for Alberta.

Table III - Firm Power Peak Load Within Provinces (Page 26): During the period 1952 to 1960 the firm power peak load or demand within Canada is expected to increase by 9,096,000 kilowatts or 91.5 per cent.

Whereas the actual increase in firm power peak demand experienced during the period 1952 to 1956 amounted to 3,973,000 kilowatts or 40.0 per cent over the 1952 total, that forecast for the next four years amounts to 5,123,000 or 36.8 per cent over the 1956 total.

The increase, 1952-1960, for Canada as a whole, reflects a fairly steady and consistent growth from the 9,944,000 kilowatts in 1952 to 9,040,000 forecast for 1960. The actual growth experienced in the past four years, 1952 to 1956 amounted to a rate of 10.0 per cent per annum. The increase, forecast for the next four years 1956-1960 inclusive, is equal to a rate of growth of 9.2 per cent per annum.

Table IV - Firm Energy Requirement within Provinces (Page 27): Kilowatt hours needed to meet the firm energy requirement within the country totalled 82,679,000,000 in 1956, an increase of 23,873,000,000 kilowatt hours or 40.6 per cent over the 1952 total of 58,806,000,000. During the period 1956 to 1960, the firm energy requirement is expected to rise substantially each year to a total of 114,365,000,000 kilowatt hours in 1960, or by 37.6 per cent. By 1960, the energy requirements are forecast to be almost double those in 1952.

Table V - Indicated Reserve (Page 28): The electric utility industry must provide sufficient power to meet demand and to provide for contingencies.

Gross capability for any province may be defined as consisting of net generating capability (hydro plus thermal) plus purchases of firm power under firm obligation from utilities outside the province. Total demand for any province consists of firm power peak load within the province, plus any indicated shortage or rejected load as well as deliveries of firm power to utilities outside the province. In Table V, gross capability is related to total firm demand on the provinces and on Canada. The difference or indicated reserve, expressed as a percentage of total firm demand, shows to what extent productive resources have been able to keep pace with total firm demand in this rapidly growing industry.

For the three years 1952, 1956 and 1960, the indicated reserves in Canada were 905,000, 1,008,000 and 3,011,000 kilowatts, which correspond to reserves of 8.3, 6.8 and 15.1 per cent, respectively, over the total demand in those years. Figures for the various provinces and Canada vary considerably from year to year and are shown in detail in this table.

Charts: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

Chart A - Net Generating Capability within Canada (Page 6): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation has increased from 1,331,000 kilowatts or 12.1 per cent of the net generating capability within Canada in 1952 to 4,316,000 kilowatts or 19.5 per cent forecast for 1960.

Chart B - Net Capability and Firm Demand within Canada (Page 7): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart C - Net Generating Capability within Provinces (Pages 8-9): This chart presents for each of the provinces, the information contained in Chart A. It illustrates the comparative importance of thermal and hydro generation within provinces.

Chart D - Net Capability and Firm Demand within Provinces (Pages 10-11): The fourth chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement within Canada (Page 12): This is an illustration of the growth in Canadian firm energy requirements by years for the period 1950 to 1960.

DEFINITIONS

NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the company, utility or system with all equipment available, at the time of the annual firm power peak load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation less deliveries of firm power under firm obligation.

FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

FIRM POWER PEAK LOAD

The annual firm power maximum average net kilowatt load of one hour duration within the company, utility or system.

INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

INDICATED RESERVE

Net capability less indicated demand (+ or -).



CHART-A

# NET GENERATING CAPABILITY WITHIN CANADA 1950 - 1960

THOUSANDS OF KILOWATTS

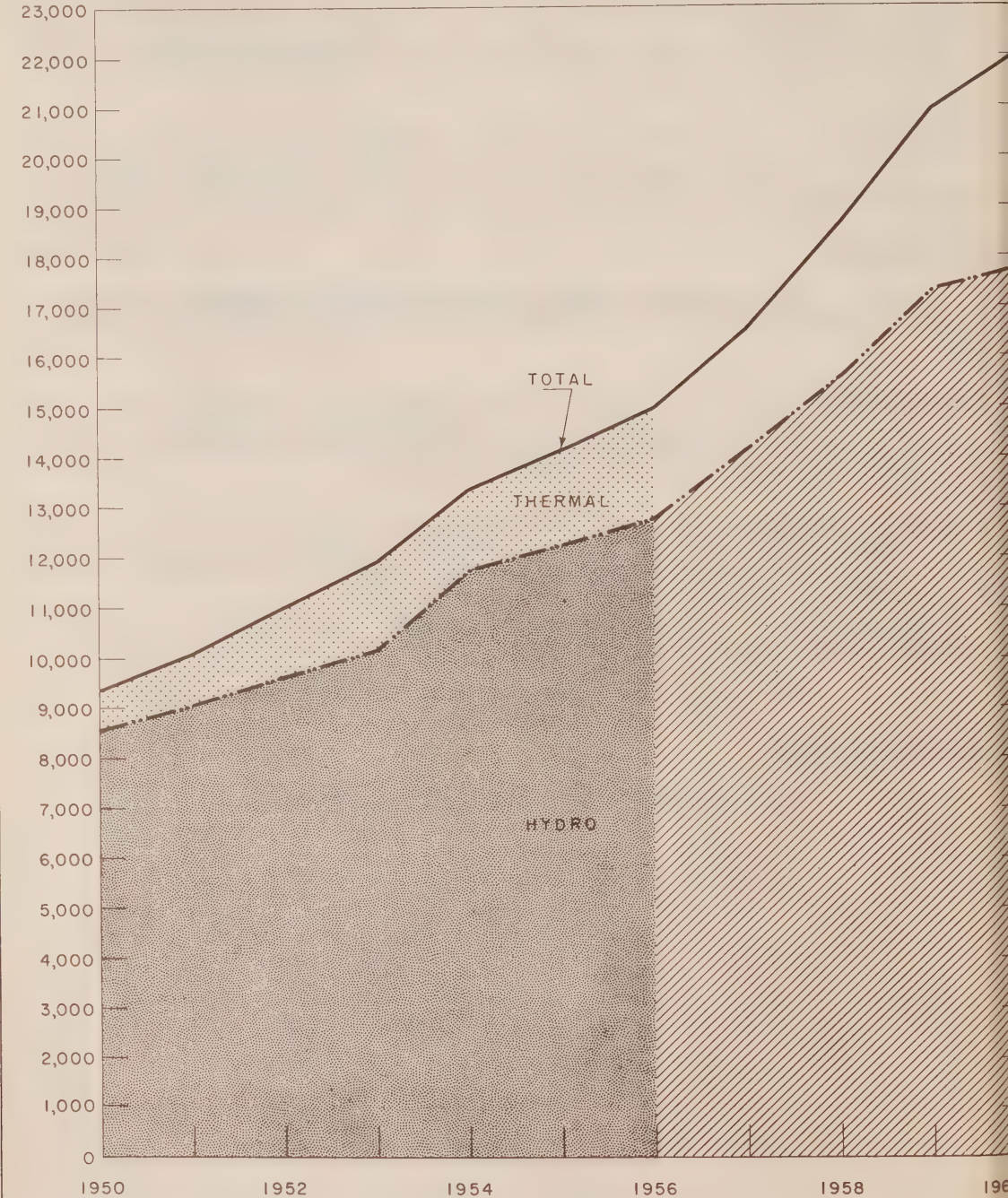




CHART - B

# NET CAPABILITY AND FIRM DEMAND WITHIN CANADA

1950 - 1960

THOUSANDS OF KILOWATTS

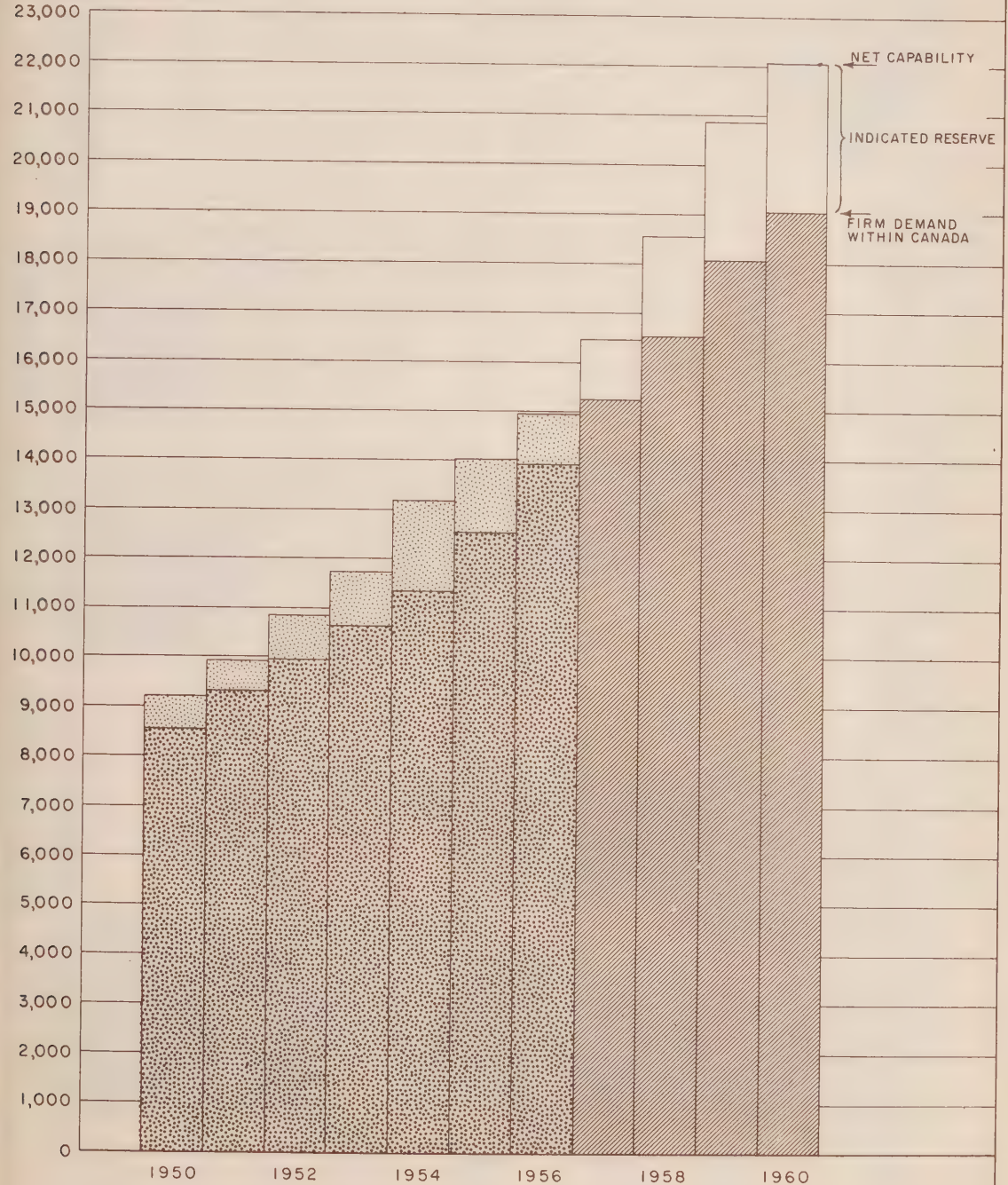
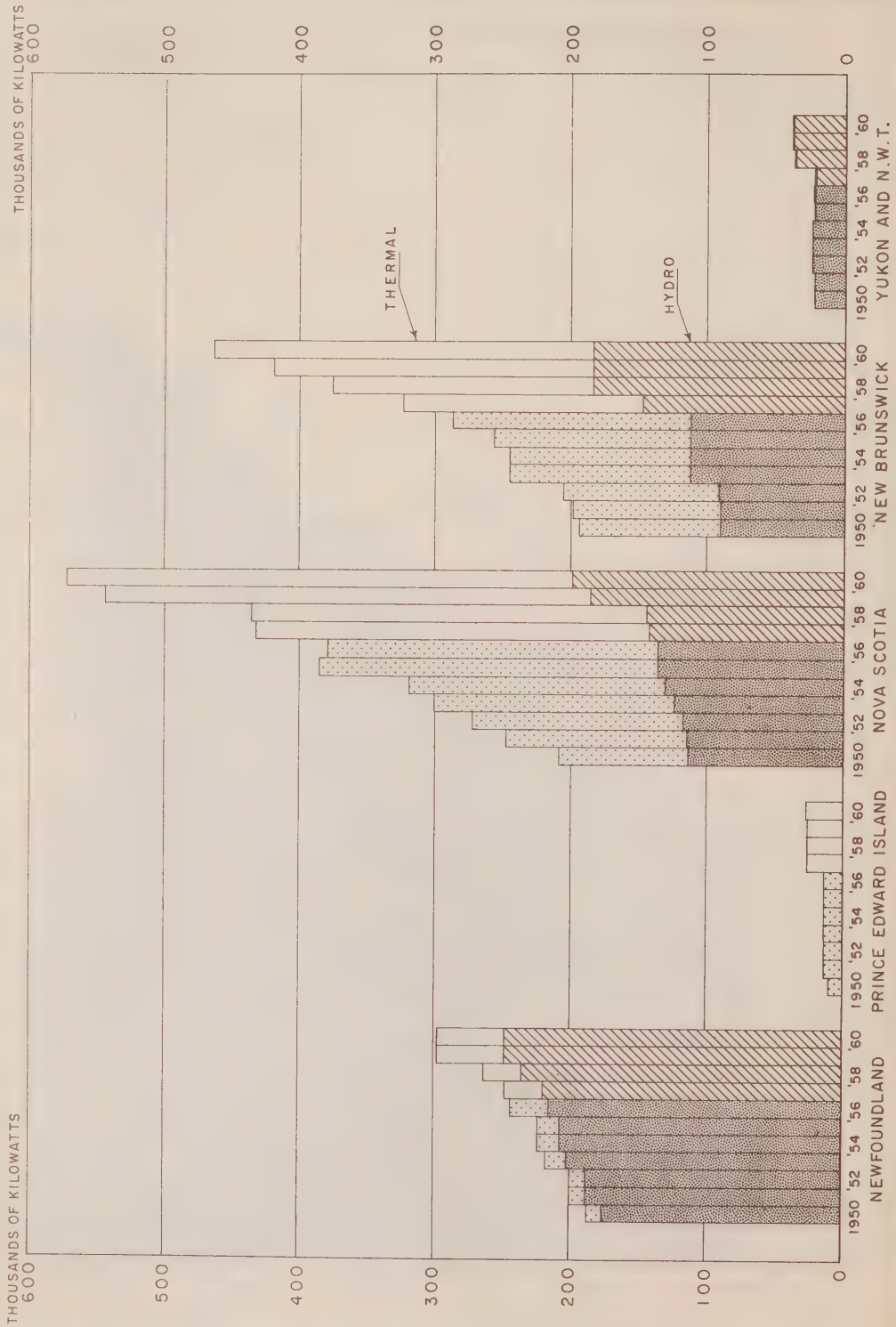


CHART - C

# NET GENERATING CAPABILITY WITHIN PROVINCES

1950 - 1960



## NET GENERATING CAPABILITY WITHIN PROVINCES

1950-1960

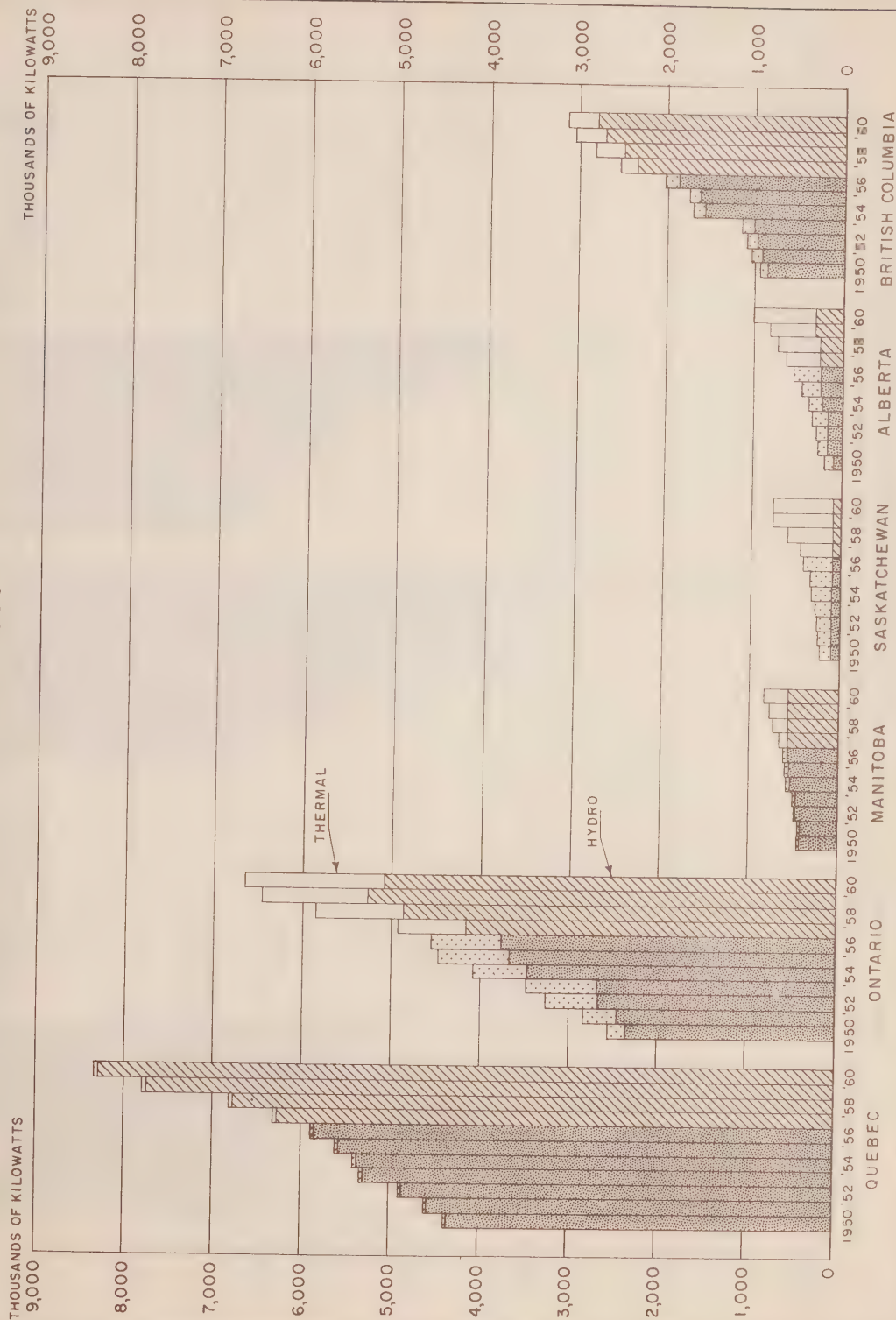
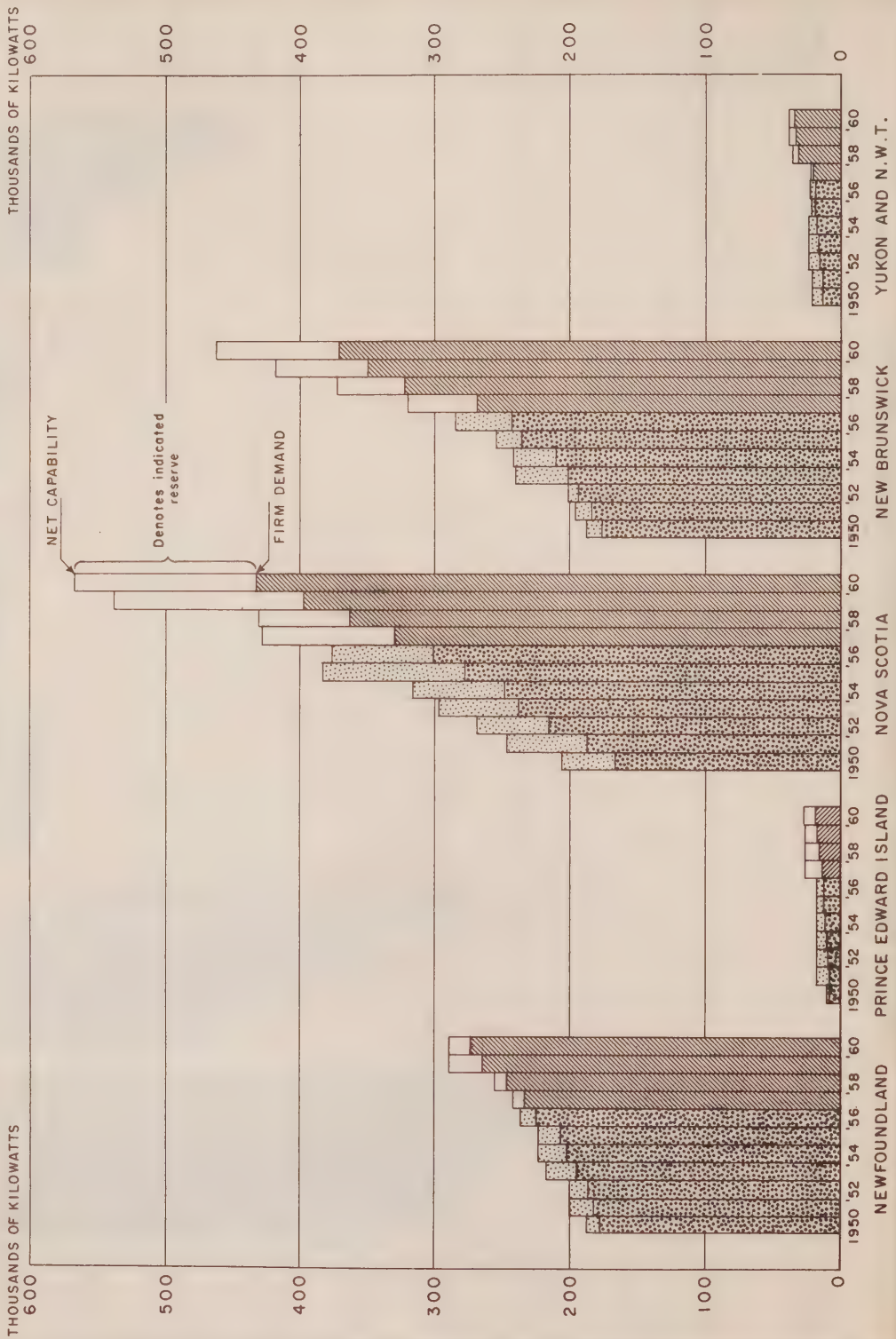




CHART-D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950 — 1960





# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950 — 1960

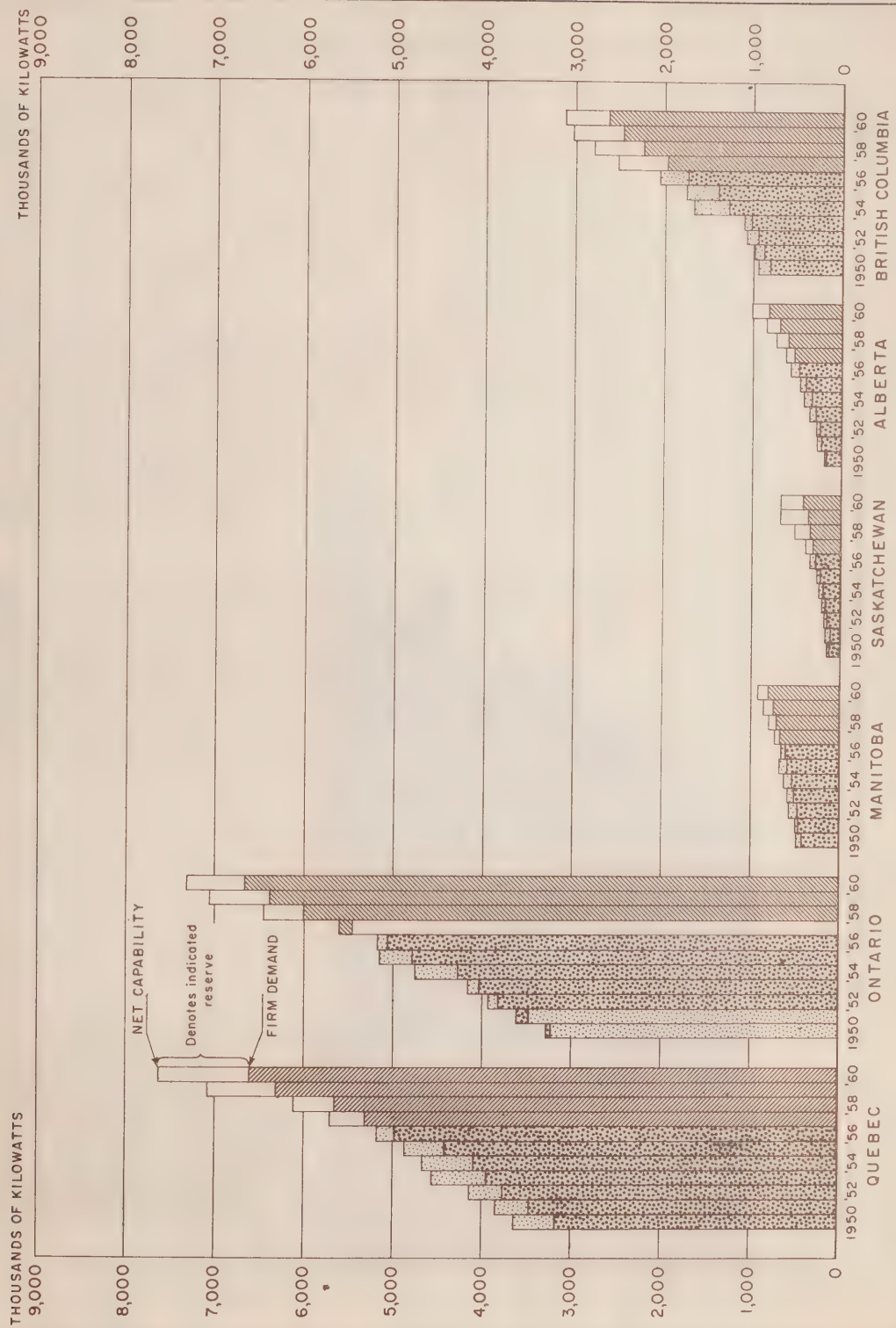


CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1950 - 1960

BILLIONS OF KILOWATTHOURS  
120

BILLIONS OF KILOWATTHOURS  
120

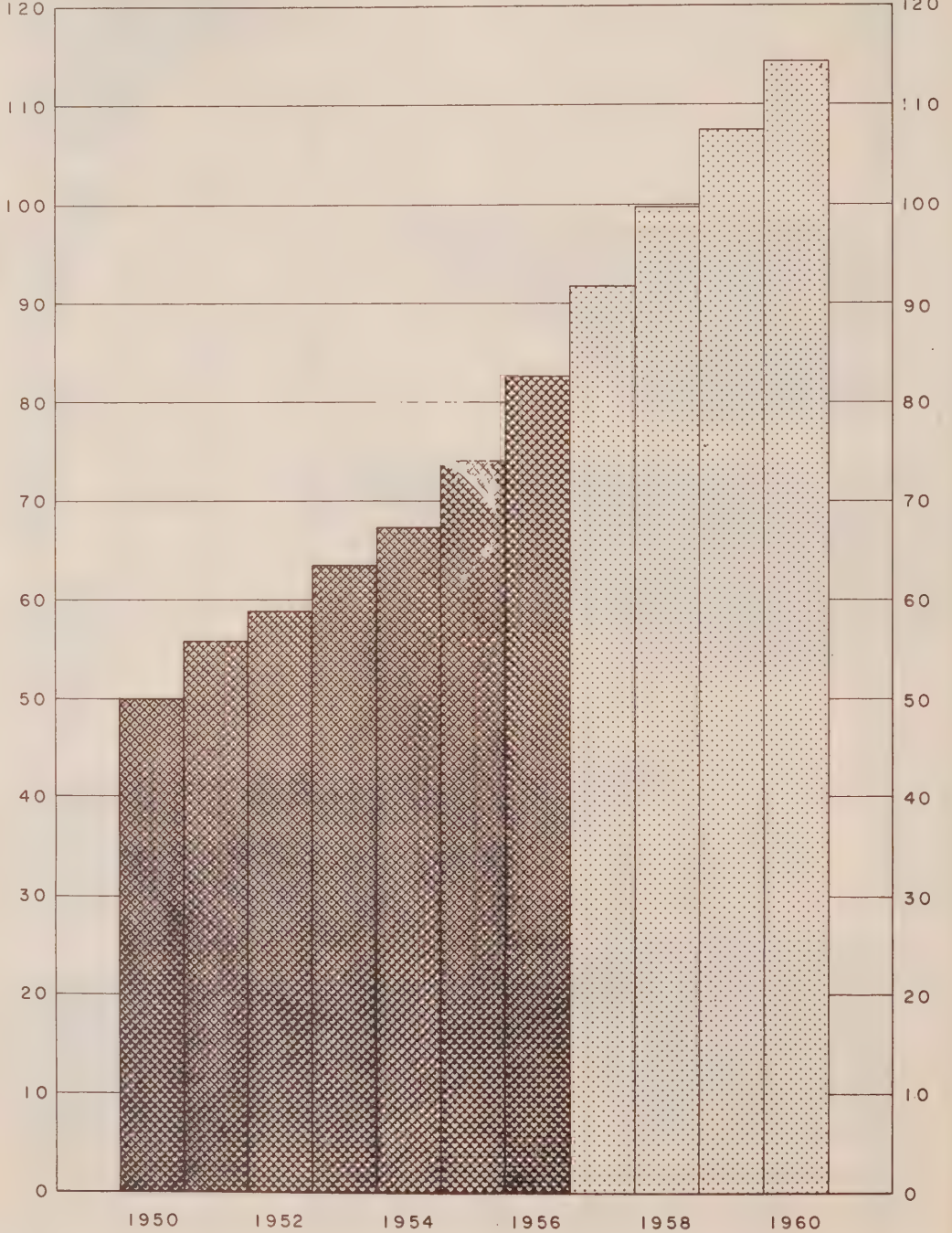


TABLE I

## SUMMARY - CANADA

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	8,575	9,044	9,673	10,183	11,719	12,211	12,841	14,148	15,586	17,316	17,795
(b) Thermal	788	1,032	1,331	1,720	1,609	1,936	2,142	2,404	3,043	3,632	4,316
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	21	22	23	24	29	38	89	36	39	42	45
3. Deliveries of firm power to:											
(a) Other provinces	176	175	178	177	176	166	147	150	150	150	105
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	9,208	9,923	10,849	11,750	13,181	14,019	14,925	16,438	18,518	20,840	22,051
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Canada	8,313	8,989	9,941	10,553	11,355	12,472	13,870	15,237	16,527	18,048	19,040
6. Indicated shortage	217	321	3	80	4	64	47	xxx	xxx	xxx	xxx
7. Indicated demand within Canada (5 + 6)	8,530	9,310	9,944	10,633	11,359	12,536	13,917	15,237	16,527	18,048	19,040
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 678	+ 613	+ 905	+ 1,117	+ 1,822	+ 1,483	+ 1,008	+ 1,201	+ 1,991	+ 2,792	+ 3,011
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within Canada	49,635	55,516	58,760	63,437	67,331	73,654	81,133	91,834	99,826	107,639	114,365
10. Indicated shortage	378	312	46	3	11	378	1,546	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within Canada (9 + 10)	50,013	55,828	58,806	63,440	67,342	74,032	82,679	91,834	99,826	107,639	114,365
12. Deliveries of firm energy to:											
(a) Other provinces	1,748	1,762	1,728	1,713	1,715	1,332	1,226	1,229	1,229	1,229	1,043
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	1,748	1,762	1,728	1,713	1,715	1,332	1,226	1,229	1,229	1,229	1,043
13. Firm energy requirement on Canada (11 + 12)	51,761	57,590	60,534	65,153	69,057	75,364	83,905	93,063	101,055	108,868	115,408



## THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

## SUMMARY - NEWFOUNDLAND (including Labrador)

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	176	188	188	202	207	207	215	219	234	247	247
(b) Thermal	12	12	12	15	16	16	27	28	28	49	49
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	6	6	6	6	6
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	200	200	217	223	223	236	241	256	290	290
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	177	182	186	195	201	206	222	233	247	265	274
6. Indicated shortage	-	-	-	-	1	1	2	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	177	182	186	195	202	207	224	233	247	265	274
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 11	+ 18	+ 14	+ 22	+ 21	+ 16	+ 12	+ 8	+ 9	+ 25	+ 16
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	1,058	1,040	1,157	1,190	1,225	1,289	1,374	1,325	1,425	1,529	1,582
10. Indicated shortage	-	-	-	-	9	10	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	1,058	1,040	1,157	1,190	1,234	1,299	1,374	1,325	1,425	1,529	1,582
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	31	68	68	68	68
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	31	68	68	68	68
13. Firm energy requirement on the province (11 + 12)	1,058	1,040	1,157	1,190	1,234	1,299	1,405	1,393	1,493	1,597	1,650

### TABLE I

## SUMMARY - PRINCE EDWARD ISLAND

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	-	-	-	-	-	-	-	-	-	-	-
(b) Thermal	10	18	18	18	18	18	18	26	26	26	27
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	10	18	18	18	18	18	18	26	26	26	27
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	8	8	9	10	11	12	12	13	15	17	19
6. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	8	8	9	10	11	12	12	13	15	17	19
								INDICATED RESERVE:			
8. Difference (4 - 7)	+ 2	+ 10	+ 9	+ 8	+ 7	+ 6	+ 6	+ 13	+ 11	+ 9	+ 8
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	31	34	37	41	46	51	53	60	67	75	83
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	31	34	37	41	46	51	53	60	67	75	83
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	31	34	37	41	46	51	53	60	67	75	83



THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - NOVA SCOTIA

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	113	114	117	124	130	136	136	141	143	185	199
(b) Thermal	96	134	154	176	188	248	242	290	290	357	372
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	2	2	2	2	2	2	2	2	2	3	3
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	207	246	269	298	316	382	376	429	431	539	568
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	163	185	213	235	245	278	301	330	364	397	432
6. Indicated shortage	4	2	2	4	3	-	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	167	187	215	239	248	278	301	330	364	397	432
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 40	+ 59	+ 54	+ 59	+ 68	+ 104	+ 75	+ 99	+ 67	+ 142	+ 136
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	891	1,027	1,122	1,211	1,277	1,357	1,486	1,616	1,742	1,880	2,021
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	891	1,027	1,122	1,211	1,277	1,357	1,486	1,616	1,742	1,880	2,021
12. Deliveries of firm energy to:											
(a) Other provinces	6	6	7	7	7	8	8	9	10	11	12
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	6	6	7	7	7	8	8	9	10	11	12
13. Firm energy requirement on the province (11 + 12)	897	1,033	1,129	1,218	1,284	1,365	1,494	1,625	1,752	1,891	2,033

TABLE I

## SUMMARY - NEW BRUNSWICK

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	90	90	92	112	112	112	112	148	184	184	184
(b) Thermal	102	108	114	132	132	144	174	174	191	235	279
2. Receipts of firm power from:											
(a) Other provinces	2	2	2	2	2	4	5	6	6	8	8
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	5	4	7	6	5	5	5	8	8	8	8
4. Net capability (1 + 2 - 3)	189	196	201	240	241	255	286	320	373	419	463
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	177	184	193	201	210	235	243	269	322	350	371
6. Indicated shortage	-	-	-	-	-	1	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	177	184	193	201	210	236	243	269	322	350	371
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 12	+ 12	+ 8	+ 39	+ 31	+ 19	+ 43	+ 51	+ 51	+ 69	+ 92
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	961	1,002	1,024	1,044	1,189	1,237	1,262	1,392	1,778	1,921	2,018
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	961	1,002	1,024	1,044	1,189	1,237	1,262	1,392	1,778	1,921	2,018
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	41	41	33	36	59	33	32	40	40	40	40
(c) Total (a + b)	41	41	33	36	59	33	32	40	40	40	40
13. Firm energy requirement on the province (11 + 12)	1,002	1,043	1,057	1,080	1,248	1,270	1,294	1,432	1,818	1,961	2,058

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - QUEBEC

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	4,370	4,587	4,877	5,300	5,378	5,583	5,854	6,281	6,763	7,749	8,299
(b) Thermal	26	26	28	35	35	36	36	41	41	41	41
2. Receipts of firm power from:											
(a) Other provinces	1	1	1	1	1	1	7	7	7	7	7
(b) United States	-	-	-	-	4	5	4	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	711	713	713	713	694	696	658	572	638	660	660
(b) United States	56	56	56	56	56	56	56	56	56	56	56
4. Net capability (1 + 2 - 3)	3,630	3,845	4,137	4,567	4,668	4,873	5,187	5,701	6,117	7,081	7,631
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	3,174	3,462	3,752	3,951	4,092	4,367	4,951	5,308	5,647	6,309	6,604
6. Indicated shortage	-	-	-	4	-	44	44	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	3,174	3,462	3,752	3,955	4,092	4,411	4,995	5,308	5,647	6,309	6,604
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 456	+ 383	+ 385	+ 612	+ 576	+ 462	+ 192	+ 393	+ 470	+ 772	+ 1,027
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	20,442	23,189	24,469	26,711	27,954	29,479	31,088	35,472	38,448	40,671	45,101
10. Indicated shortage	123	215	37	1	1	362	1,546	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	20,565	23,404	24,506	26,712	27,955	29,841	32,634	35,472	38,448	40,671	45,101
12. Deliveries of firm energy to:											
(a) Other provinces	4,287	4,288	4,304	4,272	4,155	4,049	3,896	3,838	3,941	3,945	3,950
(b) United States	820	834	821	825	848	490	491	500	500	500	500
(c) Total (a + b)	5,107	5,122	5,125	5,097	5,003	4,539	4,387	4,338	4,441	4,445	4,450
13. Firm energy requirement on the province (11 + 12)	25,672	28,526	29,631	31,809	32,958	34,380	37,021	39,810	42,889	45,116	49,551

TABLE I

## SUMMARY - ONTARIO

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	2,367	2,476	2,672	2,684	3,481	3,688	3,778	4,140	4,871	5,251	5,084
(b) Thermal	199	348	590	809	607	800	787	776	986	1,193	1,573
2. Receipts of firm power from:											
(a) Other provinces	720	722	722	722	707	708	669	582	634	655	655
(b) United States	21	22	23	24	25	33	33	36	39	42	44
3. Deliveries of firm power to:											
(a) Other provinces	1	1	1	1	1	1	1	1	1	1	1
(b) United States	85	85	85	85	85	85	86	86	86	86	41
4. Net capability (1 + 2 - 3)	3,221	3,482	3,921	4,153	4,734	5,143	5,180	5,447	6,443	7,054	7,314
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	3,078	3,292	3,803	3,969	4,261	4,757	5,064	5,603	6,004	6,375	6,669
6. Indicated shortage	213	319	1	60	-	18	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	3,291	3,611	3,804	4,029	4,261	4,775	5,064	5,603	6,004	6,375	6,669
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	- 70	- 129	+ 117	+ 124	+ 473	+ 368	+ 116	- 156	+ 439	+ 679	+ 645
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	18,016	20,395	21,630	22,985	23,928	26,376	28,875	31,915	34,158	36,204	37,833
10. Indicated shortage	255	97	9	2	1	6	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	18,271	20,492	21,639	22,987	23,929	26,382	28,875	31,915	34,158	36,204	37,833
12. Deliveries of firm energy to:											
(a) Other provinces	2	3	3	3	3	3	4	4	4	4	4
(b) United States	703	703	690	668	624	687	703	689	689	689	503
(c) Total (a + b)	705	706	693	671	627	690	707	693	693	693	507
13. Firm energy requirement on the province (11 + 12)	18,976	21,198	22,332	23,658	24,556	27,072	29,582	32,608	34,851	36,897	38,340



## THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

## SUMMARY - MANITOBA

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	418	413	487	487	522	547	556	556	556	556	556
(b) Thermal	10	10	10	23	46	46	46	106	166	229	292
2. Receipts of firm power from:											
(a) Other provinces	68	77	79	79	80	79	64	68	68	68	68
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	9	9	9	9	13	14	14	14	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	487	491	567	580	635	658	652	716	790	853	916
	A C T U A L							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	419	454	460	512	533	594	605	663	705	748	793
6. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	419	454	460	512	533	594	605	663	705	748	793
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 68	+ 37	+ 107	+ 68	+ 102	+ 64	+ 47	+ 53	+ 85	+ 105	+ 123
	M I L L I O N S O F K I L O W A T T H O U R S										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	2,216	2,427	2,526	2,670	2,852	3,086	3,295	3,521	3,701	3,931	4,151
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	2,216	2,427	2,526	2,670	2,852	3,086	3,295	3,521	3,701	3,931	4,151
12. Deliveries of firm energy to:											
(a) Other provinces	79	79	79	79	114	114	94	94	31	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	79	79	79	79	114	114	94	94	31	-	-
13. Firm energy requirement on the province (11 + 12)	2,295	2,506	2,605	2,749	2,966	3,200	3,389	3,615	3,731	3,931	4,151



TABLE I

## SUMMARY - SASKATCHEWAN

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	85	85	85	85	85	82	82	82	82	82	82
(b) Thermal	129	160	172	197	243	257	320	377	509	671	671
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	68	77	79	79	80	79	64	68	68	68	68
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	146	168	178	203	248	260	338	391	523	685	685
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	128	127	144	169	196	227	278	309	339	377	419
6. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated demand within province ( 5 + 6 )	128	127	144	169	196	227	278	309	339	377	419
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 18	+ 41	+ 34	+ 34	+ 52	+ 33	+ 60	+ 82	+ 184	+ 308	+ 266
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	407	483	583	664	776	813	1,620	1,742	1,865	2,086	2,245
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	407	483	583	664	776	813	1,620	1,742	1,865	2,086	2,245
12. Deliveries of firm energy to:											
(a) Other provinces	500	515	542	559	558	571	522	526	526	561	563
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	500	515	542	559	558	571	522	526	526	561	563
13. Firm energy requirement on the province (11 + 12)	907	998	1,125	1,223	1,334	1,384	2,142	2,268	2,391	2,647	2,808

## THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - ALBERTA  
Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	83	162	162	162	202	220	220	237	237	317	317
(b) Thermal	108	109	119	187	194	238	338	386	483	508	690
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	4	-	4	3	2	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	3	5	7	8	-	3	-	-	-	-	2
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	266	274	341	400	455	562	626	722	825	1,005
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	176	220	233	284	313	391	451	526	606	697	801
6. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	176	220	233	284	313	391	451	526	606	697	801
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 12	+ 46	+ 41	+ 57	+ 87	+ 64	+ 111	+ 100	+ 116	+ 128	+ 204
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	1,023	1,114	1,167	1,372	1,581	1,859	2,180	2,444	2,795	3,193	3,662
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	1,023	1,114	1,167	1,372	1,581	1,859	2,180	2,444	2,795	3,193	3,662
12. Deliveries of firm energy to:											
(a) Other provinces	14	20	30	6	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	14	20	30	6	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	1,037	1,134	1,197	1,378	1,581	1,859	2,180	2,444	2,795	3,193	3,662

TABLE I

## SUMMARY - BRITISH COLUMBIA

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	852	908	969	1,003	1,578	1,614	1,866	2,323	2,481	2,708	2,790
(b) Thermal	96	107	114	128	130	133	153	199	322	322	321
2. Receipts of firm power from:											
(a) Other provinces	3	5	7	8	-	3	-	-	-	-	2
(b) United States	-	-	-	-	-	-	52	-	-	-	1
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	4	-	4	3	2	-	-
(b) United States	30	30	30	30	30	20	-	-	-	-	-
4. Net capability (1 + 2 - 3)	921	990	1,060	1,109	1,674	1,730	2,067	2,519	2,801	3,030	3,114
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	799	861	932	1,010	1,275	1,386	1,724	1,963	2,247	2,480	2,624
6. Indicated shortage	-	-	-	12	-	-	1	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	799	861	932	1,022	1,275	1,386	1,725	1,963	2,247	2,480	2,624
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 122	+ 129	+ 128	+ 87	+ 399	+ 344	+ 342	+ 556	+ 554	+ 550	+ 490
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	4,523	4,741	4,979	5,466	6,414	8,011	9,802	12,248	13,734	15,995	15,511
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	4,523	4,741	4,979	5,466	6,414	8,011	9,802	12,248	13,734	15,995	15,511
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	10	10	10	11	11	11	12
(b) United States	184	184	184	184	184	122	-	-	-	-	-
(c) Total (a + b)	184	184	184	184	194	132	10	11	11	11	12
13. Firm energy requirement on the province (11 + 12)	4,707	4,925	5,163	5,650	6,608	8,143	9,792	12,237	13,723	15,984	15,499

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - YUKON AND NORTH WEST TERRITORIES

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956	FORECAST			
								1957	1958	1959	1960
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	21	21	24	24	24	22	22	21	35	37	37
(b) Thermal	-	-	-	-	-	-	1	1	1	1	1
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	21	21	24	24	24	22	23	22	36	38	38
	ACTUAL							FORECAST			
FIRM POWER PEAK LOAD:											
5. Within province	14	14	16	17	18	19	19	20	31	33	34
6. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
7. Indicated demand within province (5 + 6)	14	14	16	17	18	19	19	20	31	33	34
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 7	+ 7	+ 8	+ 7	+ 6	+ 3	+ 4	+ 2	+ 5	+ 5	+ 4
	MILLIONS OF KILOWATT HOURS										
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	67	64	66	83	89	96	98	99	113	154	158
10. Indicated shortage	-	-	-	-	-	-	-	xxx	xxx	xxx	xxx
11. Indicated firm energy requirement within province (9 + 10)	67	64	66	83	89	96	98	99	113	154	158
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	67	64	66	83	89	96	98	99	113	154	158



THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE II

NET GENERATING CAPABILITY WITHIN PROVINCES\*

Thousands of Kilowatts

P R O V I N C E	1950	1951	1952	1953	1954	1955	1956	F O R E C A S T				P E R C E N T A G E C H A N G E	
								1957	1958	1959	1960	1952-1956	1956-1960
Newfoundland (including Labrador)	188	200	200	217	223	223	242	247	262	296	296	21.0	22.3
Prince Edward Island	10	18	18	18	18	18	18	26	26	26	27	0.0	50.0
Nova Scotia	209	248	271	300	318	384	378	431	433	542	571	39.5	51.1
New Brunswick	192	198	206	244	244	256	286	322	375	419	463	38.8	61.9
Quebec	4,396	4,613	4,905	5,335	5,413	5,619	5,890	6,322	6,804	7,790	8,340	20.1	41.6
Ontario	2,566	2,824	3,262	3,493	4,088	4,488	4,565	4,916	5,857	6,444	6,657	43.9	45.8
Manitoba	428	423	497	510	568	593	602	662	722	785	848	21.1	40.9
Saskatchewan	214	245	257	282	328	339	402	459	591	753	753	56.4	87.3
Alberta	191	271	281	349	396	458	558	623	720	825	1,007	98.6	80.8
British Columbia	948	1,015	1,083	1,131	1,708	1,747	2,019	2,522	2,803	3,030	3,111	86.4	54.1
Yukon and N.W.T.	21	21	24	24	24	22	23	22	36	38	38	- 4.2	65.2
Canada	9,363	10,076	11,004	11,903	13,328	14,147	14,983	16,552	18,629	20,948	22,111	36.2	47.6
													101.0

\* Hydro plus thermal (Table I, item 1a + 1b)

## THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE III

## FIRM POWER PEAK LOAD WITHIN PROVINCES\*

Thousands of Kilowatts

P R O V I N C E	P R O V I N C E										F O R E C A S T			P E R C E N T A G E C H A N G E		
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952-1956	1956-1960	1952-1960		
Newfoundland (Including Labrador)	177	182	186	195	202	207	224	233	247	265	274	20.4	22.3	47.3		
Prince Edward Island	8	8	9	10	11	12	12	13	15	17	19	33.3	58.3	111.1		
Nova Scotia	167	187	215	239	248	278	301	330	364	397	432	40.0	43.5	100.9		
New Brunswick	177	184	193	201	210	236	243	269	322	350	371	25.9	52.7	92.2		
Quebec	3,174	3,462	3,752	3,955	4,092	4,411	4,995	5,308	5,647	6,309	6,604	33.1	32.2	76.0		
Ontario	3,291	3,611	3,804	4,029	4,261	4,775	5,064	5,603	6,004	6,375	6,669	33.1	31.7	75.3		
Manitoba	419	454	460	512	533	594	605	663	705	748	793	31.5	31.1	72.4		
Saskatchewan	128	127	144	169	196	227	278	309	339	377	419	93.1	50.7	191.0		
Alberta	176	220	233	284	313	391	451	526	606	697	801	93.6	77.6	243.8		
British Columbia	799	861	932	1,022	1,275	1,386	1,725	1,963	2,247	2,480	2,624	85.1	52.1	181.5		
Yukon and N.W.T.	14	14	16	17	18	19	19	20	31	33	34	18.8	78.9	112.5		
Canada	8,530	9,310	9,944	10,633	11,359	12,536	13,917	15,237	16,527	18,048	19,040	40.0	36.8	91.5		

\* Indicated Firm Demand (Table I, item 7)

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE IV

FIRM ENERGY REQUIREMENT WITHIN PROVINCES\*

Millions of Kilowatt Hours

P R O V I N C E	F O R E C A S T							P E R C E N T A G E C H A N G E					
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952-1956	1956-1960
Newfoundland (including Labrador)	1,058	1,040	1,157	1,190	1,234	1,299	1,374	1,325	1,425	1,529	1,582	18.8	15.1
Prince Edward Island	31	34	37	41	46	51	53	60	67	75	83	43.2	56.6
Nova Scotia	891	1,027	1,122	1,211	1,277	1,357	1,486	1,616	1,742	1,880	2,021	32.4	36.0
New Brunswick	961	1,002	1,024	1,044	1,189	1,237	1,262	1,392	1,778	1,921	2,018	23.2	59.9
Quebec	20,565	23,404	24,506	26,712	27,955	29,841	32,634	35,472	38,448	40,671	45,101	33.2	38.2
Ontario	18,271	20,492	21,639	22,987	23,929	26,382	28,875	31,915	34,158	36,204	37,833	33.4	31.0
Manitoba	2,216	2,427	2,526	2,670	2,852	3,086	3,295	3,521	3,701	3,931	4,151	30.4	26.0
Saskatchewan	407	483	583	664	776	813	1,620	1,742	1,865	2,086	2,245	177.9	38.6
Alberta	1,023	1,114	1,167	1,372	1,581	1,859	2,180	2,444	2,795	3,193	3,662	86.8	68.0
British Columbia	4,523	4,741	4,979	5,466	6,414	8,011	9,802	12,248	13,734	15,995	15,511	96.9	58.2
Yukon and N.W.T.	67	64	66	83	89	96	98	99	113	154	158	48.5	61.2
Canada	50,013	55,828	58,806	63,440	67,342	74,032	82,679	91,834	99,826	107,639	114,365	40.6	38.3
													94.5

\* Table I item 11.

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE\*

Thousands of Kilowatts

	1950							FORECAST				PERCENTAGE CHANGE	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952-1956	1952-1960
Newfoundland (including Labrador)													
1. Gross capability	188	200	200	217	223	223	242						
2. Total firm demand on the province	177	182	186	195	202	207	230	247	262	296	296	21.0	22.3 48.0
3. Indicated reserve (1-2)	11	18	14	22	21	16	12	239	253	271	280	23.7	21.7 50.5
4. Indicated reserve expressed as a % of total firm demand	6.2	9.9	7.5	11.2	10.4	7.7	5.2	8	9	25	16	xxx	xxx xxx
Prince Edward Island													
1. Gross capability	10	18	18	18	18	18	18						
2. Total firm demand on the province	8	8	9	10	11	12	12	26	26	26	27	0.0	50.0 50.0
3. Indicated reserve (1-2)	2	10	9	8	7	6	6	13	15	17	19	33.3	58.3 111.1
4. Indicated reserve expressed as a % of total firm demand	25.0	125.0	100.0	80.0	63.6	50.0	50.0	13	11	9	8	xxx	xxx xxx
Nova Scotia													
1. Gross capability	209	248	271	300	318	384	378	100.0	73.3	52.9	42.1	xxx	xxx xxx
2. Total firm demand on the province	169	189	217	241	250	280	303	431	433	542	571	39.5	51.1 110.7
3. Indicated reserve (1-2)	40	59	54	59	68	104	75	332	366	400	435	39.6	43.6 100.5
4. Indicated reserve expressed as a % of total firm demand	23.7	31.2	24.9	24.5	27.2	37.1	24.8	99	67	142	136	xxx	xxx xxx
New Brunswick													
1. Gross capability	194	200	208	246	246	260	291	29.8	18.3	35.5	31.3	xxx	xxx xxx
2. Total firm demand on the province	182	188	200	207	215	241	248	328	381	427	471	38.5	61.8 124.0
3. Indicated reserve (1-2)	12	12	8	39	31	19	43	277	330	358	379	22.5	52.7 87.0
4. Indicated reserve expressed as a % of Total firm demand	6.6	6.4	4.0	18.8	14.4	7.9	17.3	51	51	69	92	xxx	xxx xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).



THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE\*

Thousands of kilowatts

	F O R E C A S T										PERCENTAGE CHANGE		
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952-1956	1956-1960
Quebec													
1. Gross capability	4,397	4,614	4,906	5,336	5,418	5,625	5,901	6,329	6,811	7,797	8,347	20.3	41.5
2. Total firm demand on the province	3,941	4,231	4,521	4,724	4,842	5,163	5,709	5,936	6,341	7,025	7,320	26.3	28.2
3. Indicated reserve (1-2)	456	383	385	612	576	462	192	393	470	772	1,027	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	11.6	9.2	8.6	13.1	12.0	9.0	3.4	6.6	7.4	11.0	14.0	xxx	xxx
Ontario													
1. Gross capability	3,307	3,568	4,007	4,239	4,820	5,229	5,267	5,534	6,530	7,141	7,356	31.4	39.7
2. Total firm demand on the province	3,377	3,697	3,890	4,115	4,347	4,861	5,151	5,690	6,091	6,462	6,711	32.4	30.3
3. Indicated reserve (1-2)	- 70	- 129	117	124	473	368	116	- 156	439	679	645	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	-	-	3.1	3.1	11.1	7.7	2.3	-	7.2	10.5	9.6	xxx	xxx
Manitoba													
1. Gross capability	496	500	576	589	648	672	666	730	790	853	916	15.6	37.5
2. Total firm demand on the province	428	463	469	521	546	608	619	677	705	748	793	32.0	28.1
3. Indicated reserve (1-2)	68	37	107	68	102	64	47	53	85	105	123	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	15.9	8.0	22.8	13.1	18.7	10.5	7.6	7.8	12.0	14.0	15.5	xxx	xxx
Saskatchewan													
1. Gross capability	214	245	257	282	328	339	402	459	591	753	753	56.4	87.3
2. Total firm demand on the province	196	204	223	248	276	306	342	377	407	445	487	53.4	42.4
3. Indicated reserve (1-2)	18	41	34	34	52	33	60	82	184	308	266	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	20.0	25.4	18.8	16.8	21.3	12.0	17.5	21.8	45.2	69.2	54.6	xxx	xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3)

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE\*  
Thousands of Kilowatts

	FORECAST											PERCENTAGE CHANGE		
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952-1956	1956-1960	
Alberta														
1. Gross capability	191	271	281	349	400	458	562	626	722	825	1,007	100.0	79.2	258.4
2. Total firm demand on the province	179	225	240	292	313	394	451	526	606	697	803	87.9	78.0	234.6
3. Indicated reserve (1-2)	12	46	41	57	87	64	111	100	116	128	204	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.7	20.4	17.1	19.5	27.8	16.2	24.6	19.0	19.1	18.4	25.4	xxx	xxx	xxx
British Columbia														
1. Gross capability	951	1,020	1,090	1,139	1,708	1,750	2,071	2,522	2,803	3,030	3,114	90.0	50.4	185.7
2. Total firm demand on the province	829	891	962	1,052	1,309	1,406	1,729	1,966	2,249	2,480	2,624	79.6	51.9	172.8
3. Indicated reserve (1-2)	122	129	128	87	399	344	342	556	554	550	490	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	14.7	14.5	13.3	8.3	30.5	24.5	19.8	28.3	24.6	22.2	18.7	xxx	xxx	xxx
Yukon and N.W.T.														
1. Gross capability	21	21	24	24	24	22	23	22	36	38	38	- 8.3	72.7	58.3
2. Total firm demand on the province	14	14	16	17	18	19	19	20	31	33	34	18.8	78.9	112.5
3. Indicated reserve (1-2)	7	7	8	7	6	3	4	2	5	5	4	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	50.0	50.0	50.0	41.2	33.3	15.8	21.1	10.0	16.1	15.2	11.8	xxx	xxx	xxx
Canada														
1. Gross capability	9,384	10,098	11,027	11,927	13,357	14,185	15,072	16,588	18,668	20,990	22,156	36.7	47.0	100.9
2. Total firm demand on Canada	8,706	9,485	10,122	10,810	11,535	12,702	14,064	15,387	16,677	18,198	19,145	38.9	36.1	89.1
3. Indicated reserve (1-2)	678	613	905	1,117	1,822	1,483	1,008	1,201	1,991	2,792	3,011	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	7.8	6.5	8.9	10.3	15.8	11.7	7.2	7.8	11.9	15.3	15.7	xxx	xxx	xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the Provinces (Table I, item 7 + 3)

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The function of an Area Representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey. For this reason Area Representatives must have the complete co-operation of Company representatives in securing the information required for the power survey.















*Fourth*  
ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

March, 1958

DOMINION BUREAU OF STATISTICS  
Public Finance and Transportation Division  
Transportation and Public Utilities Section

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204



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*Fourth*  
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## TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Review of Survey Results	2
Definitions	5
Chart A: Net Generating Capability within Canada, 1950 through 1961	6
Chart B: Net Capability and Firm Demand within Canada, 1950 through 1961	7
Chart C: Net Generating Capability within Provinces, 1950 through 1961	9
Chart D: Net Capability and Firm Demand within Provinces, 1950 through 1961	10
Chart E: Firm Energy Requirement within Canada, 1950 through 1961	12
Table I: Summary by Provinces and Canada, 1950, 1952 through 1961	13
Table II: Net Generating Capability within Provinces, 1950, 1952 through 1961	25
Table III: Firm Power Peak Load Within Provinces, 1950, 1952 through 1961	26
Table IV: Firm Energy Requirement within Provinces 1950, 1952 through 1961	27
Table V: Indicated Reserve, 1950, 1952 through 1961	28
Canadian Electrical Association Policy Sub-Committee	31
Surveys Sub-Committee	32





## Introduction

This report presents the results of the fourth annual Electric Power Survey of Capability and Load which was conducted in March 1958 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate 10,000,000 kilowatt hours or more per annum. The 1958 report is based on returns from 128 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 128 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1952 - 1961 inclusive, the latter four years on a forecast basis. Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load, load being calculated in terms of contractual commitments for firm power.

Generating capability is the maximum output that can be maintained at time of annual firm power peak load. Net generating capability refers to the amount left after power used in station service is deducted. It is calculated on the basis of actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed capacity a term used in reference to the name plate ratings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table I) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

## Review of Survey Results

Net Generating Capability: Total net generating capability in Canada rose 9.9 per cent between 1956 and 1957 to 16,469,000 kilowatts from 14,983,000. Further annual increases totalling 42.6 per cent over the next four years are expected to result in a net generating capability in 1961 of 23,484,000 kilowatts. The proportion of thermal generation to the total is expected to rise from 14.1 per cent in 1957 to 21.1 per cent in 1961.

Companies reporting for the first time this year accounted for 134,000 kilowatts or .8 per cent of total 1957 net generating capability.

Firm Power Peak Load: Firm power peak load within Canada stood at 14,925,000 kilowatts in 1957, an increase of 7.2 per cent over the 1956 total of 13,917,000. The forecast for 1961 is 19,526,000 kilowatts, an estimated rise of 30.8 per cent.

Indicated Reserve: The indicated reserve for Canada rose to 1,394,000 kilowatts from 975,000 in 1956. By 1961, it will have risen to 3,851,000 kilowatts, a reserve equivalent to 16.4 per cent of net capability as compared with this year's 8.5 per cent.

Firm Energy Requirement: The increase over 1956 was not as large as forecast one year ago. A gain of 5.0 per cent raised the firm energy requirement to 86,333,000,000 kilowatt hours, an amount considerably less than the 91,834,000,000 kilowatt hours forecast. Firm energy requirement is now expected to increase to 114,478,000,000 kilowatt hours by 1961, a level approximating that forecast for 1960 one year ago.

Table 1 - Summary (Pages 13 to 24): This table presents capability, firm power peak load, indicated reserve and firm energy requirement summarized for Canada and for each of the provinces.

Table 2 - Net Generating Capability Within Provinces (Page 25): Net generating capability is presented in this table by province. The growth over the last four years for most provinces has been quite impressive, the gain of 107.8 per cent in British Columbia being the largest. Between 1953 and 1957 the growth in Canada as a whole amounted to 4,566,000 kilowatts, a gain of 38.4 per cent. During the next four years an indicated growth of 42.6 per cent will add 7,015,000 kilowatts to net generating capability resulting in an overall increase for the period 1953-1961 of 97.3 per cent. Growth in the individual provinces will during the period vary from a low of 41.5 per cent in Newfoundland to 198.1 per cent in British Columbia.

Table III - Firm Power Peak Load Within Provinces (Page 26): Actual and forecast data on firm power peak load indicate an increase within Canada between 1953 and 1961 of 8,896,000 kilowatts or 83.7 per cent. Whereas the increase in demand between 1953 and 1957 amounted to 4,292,000 kilowatts or 40.4 per cent the increase estimated for the next four years is 4,604,000 kilowatts or 30.8 per cent.

Table IV - Firm Energy Requirement Within Provinces (Page 27): Kilowatt hours needed to meet the firm energy requirement within the country totalled

86,333,000,000 in 1957, an increase of 22,893,000,000 or 36.1 per cent over the 1953 total of 63,440,000,000. By 1961 the firm energy requirement is expected to reach 114,473,000,000 kilowatt hours following a further four-year increase of 32.6 per cent.

Table V - Indicated Reserve (Page 28): This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power deliveries outside the province. Gross capability consists of net generating capability (hydro and thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm demand is the indicated reserve, and this, expressed as a percentage of total firm demand, can be used as a measurement of the industry's ability to satisfy demand and meet contingencies.

For Canada as a whole the reserve is expected to rise from a low of 6.9 per cent in 1956 to a high of 23.2 per cent in 1960. In 1957 it was 1,394,000 kilowatts or 9.2 per cent. Reserves for individual provinces in 1957 varied from a high of 78.6 per cent in Prince Edward Island to a low of 2.5 per cent in Ontario. Since not all systems are fully interconnected, it should be remembered that reserves of power cannot always be completely utilized.

Charts: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

Chart A - Net Generating Capability Within Canada (Page 6): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation is expected to increase from 1,720,000 kilowatts or 14.5 per cent of the net generating capability within Canada in 1953 to 4,959,000 kilowatts or 21.1 per cent in 1961.

Chart B - Net Capability and Firm Demand Within Canada (Page 7): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart C - Net Generating Capability Within Provinces (Pages 8 - 9): This chart presents for each of the provinces, the information contained in Chart A. It illustrates the comparative importance of thermal and hydro generation within provinces.

Chart D - Net Capability and Firm Demand Within Provinces (Pages 10 - 11): The fourth chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement Within Canada (Page 12): This is an illustration of the growth in Canadian firm energy requirements by years for the period 1950 to 1961.





## DEFINITIONS

### NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the company, utility or system with all equipment available, at the time of the annual firm power peak load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

### FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

### NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation less deliveries of firm power under firm obligation.

### FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

### FIRM POWER PEAK LOAD

The annual firm power maximum average net kilowatt load of one hour duration within the company, utility or system.

### INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

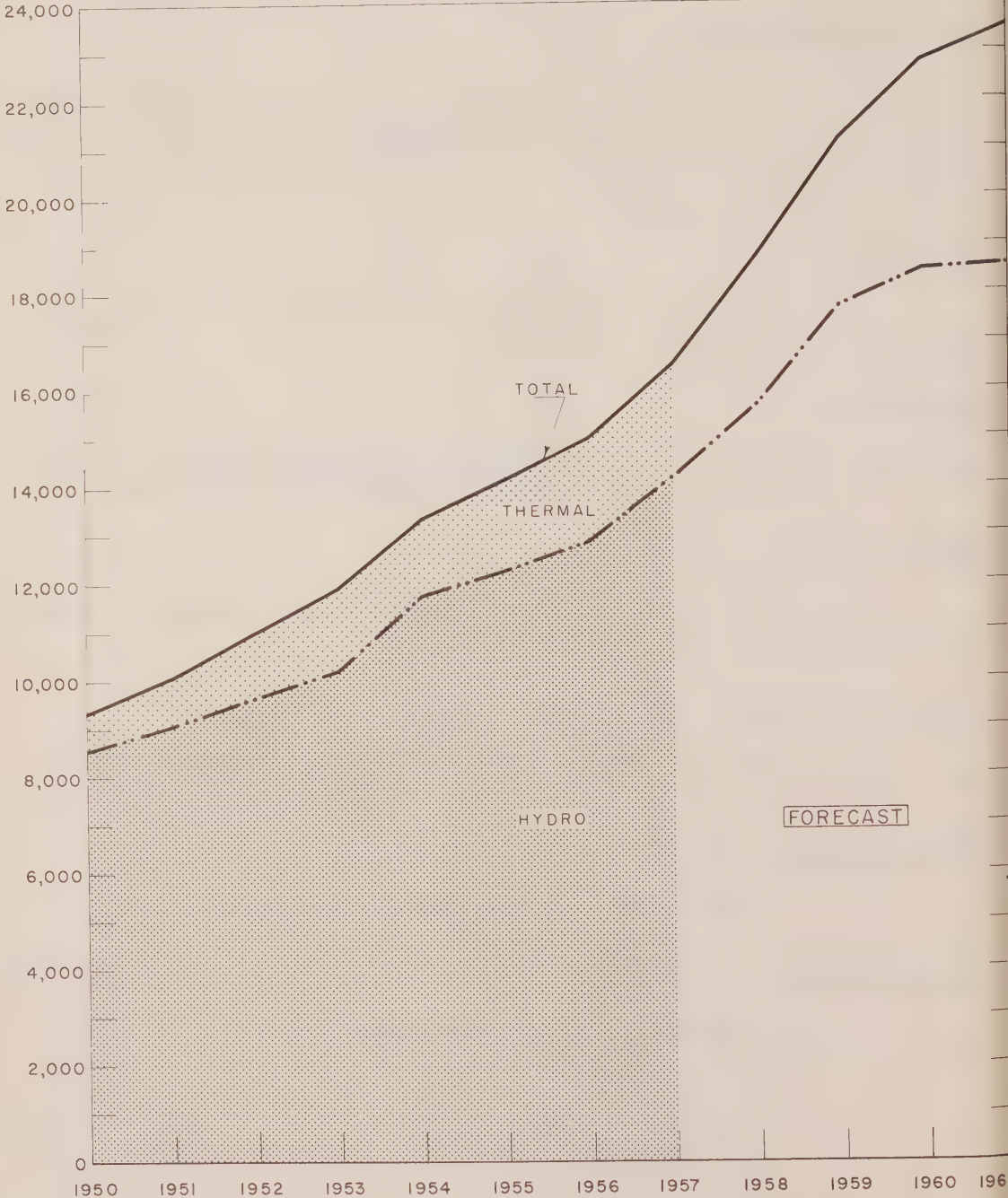
### INDICATED RESERVE

Net capability less indicated demand (+ or -).

CHART-A

# NET GENERATING CAPABILITY WITHIN CANADA 1950-1961

THOUSANDS OF KILOWATTS  
24,000



FORECAST

CHART-B

# NET CAPABILITY AND FIRM DEMAND WITHIN CANADA

1950 — 1961

THOUSANDS OF KILOWATTS

24,000

22,000

20,000

18,000

16,000

14,000

12,000

10,000

8,000

6,000

4,000

2,000

0

NET CAPABILITY

INDICATED RESERVES

FIRM DEMAND  
WITHIN CANADA

FORECAST

1950

1951

1952

1953

1954

1955

1956

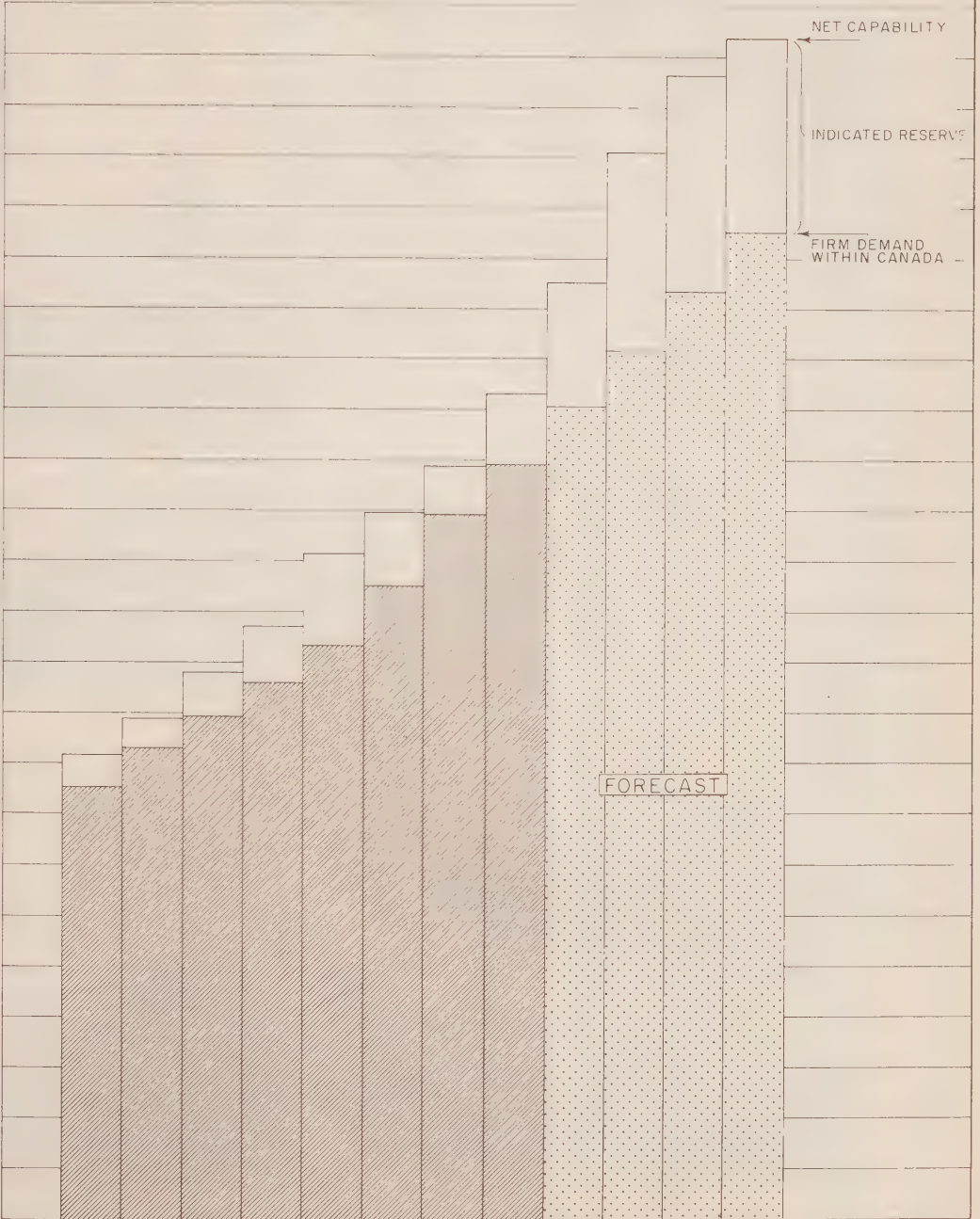
1957

1958

1959

1960

1961



Country	1970 (Thousands of Kilowatts)	1980 (Thousands of Kilowatts)
Canada	~100	~100
U.S.	~450	~550
France	~150	~150
West Germany	~100	~100
U.K.	~100	~100
Italy	~100	~100
Japan	~100	~100
India	~100	~100

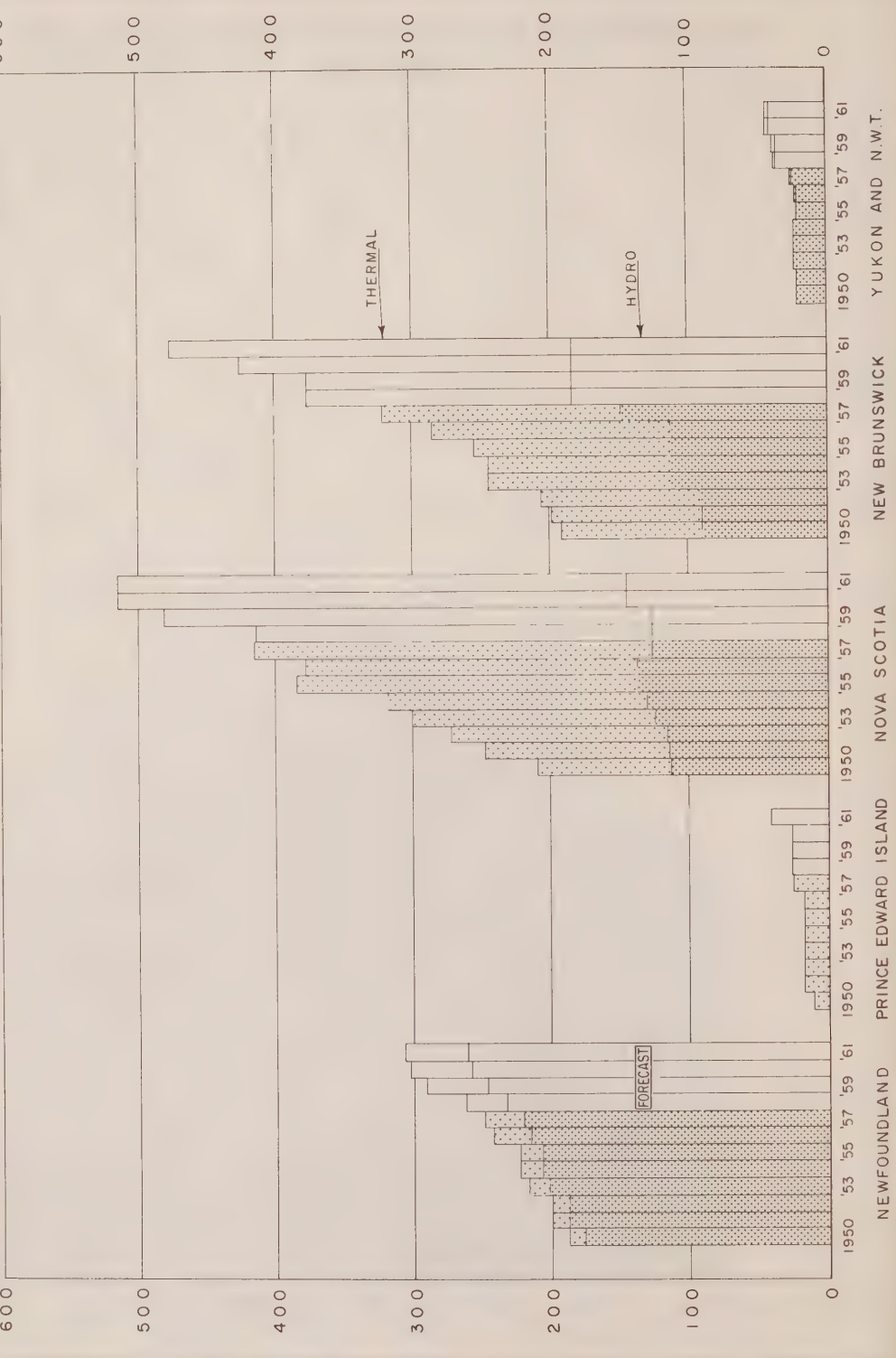


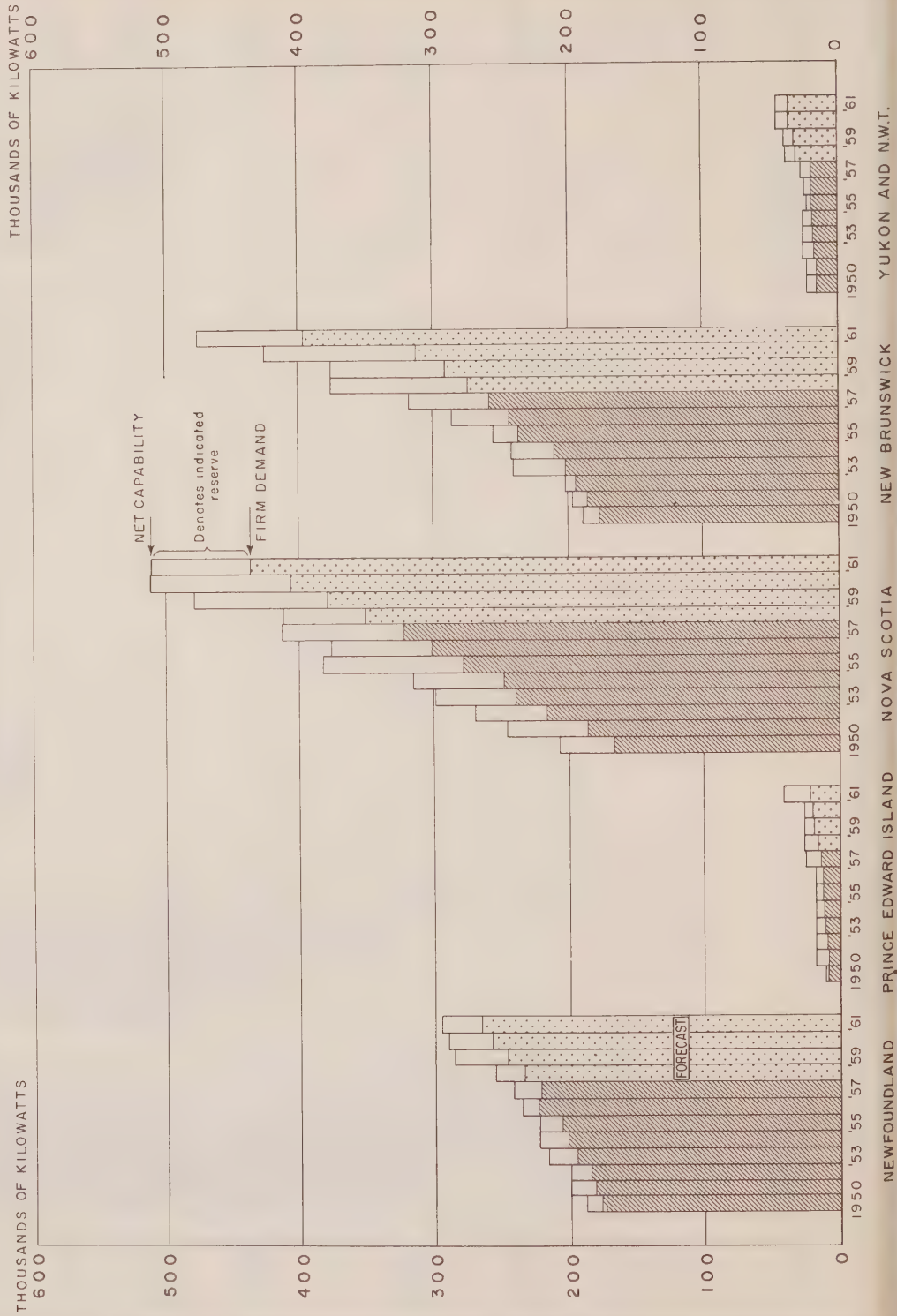




CHART-D

## NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950—1961



NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES  
1950 — 1961

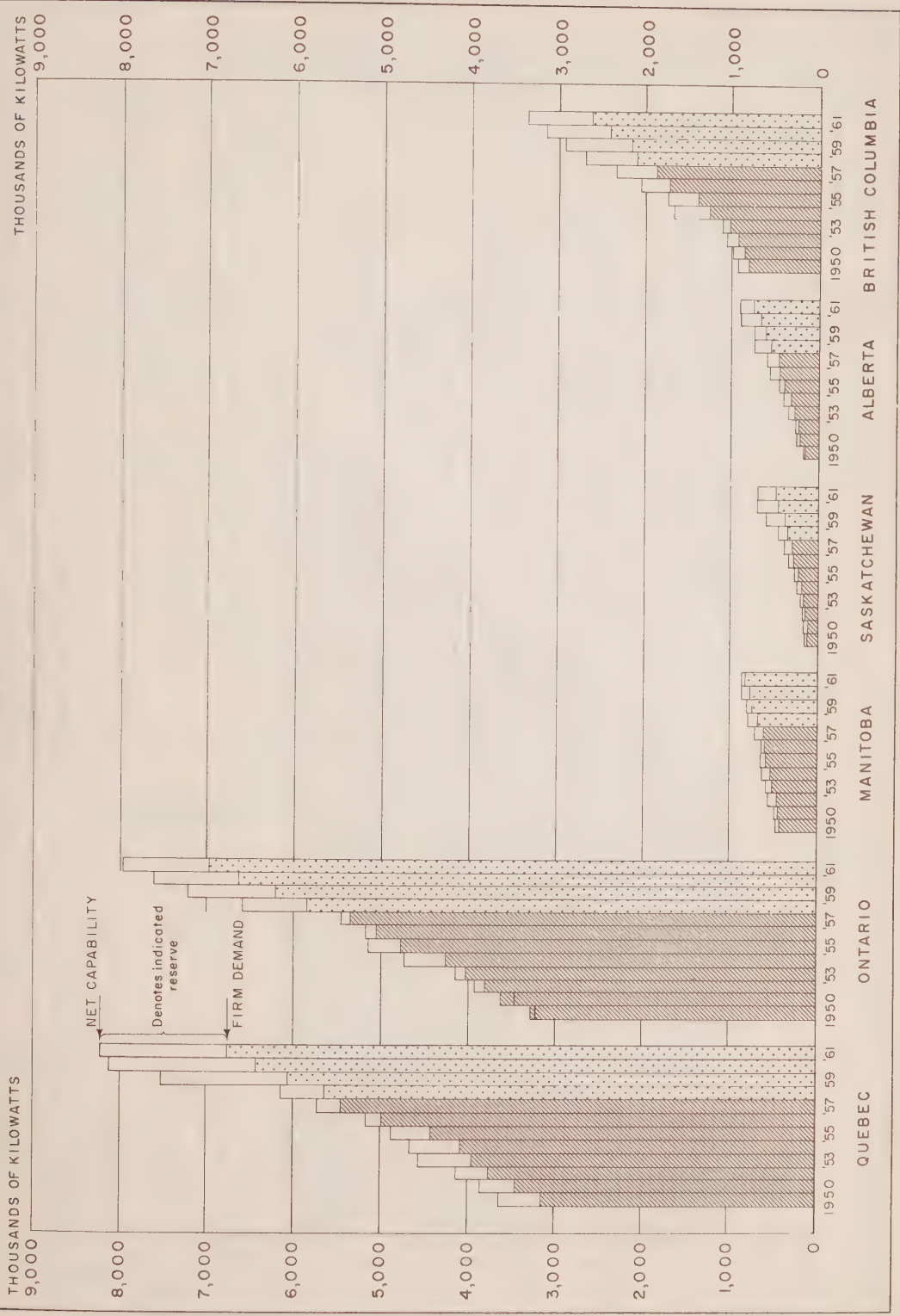
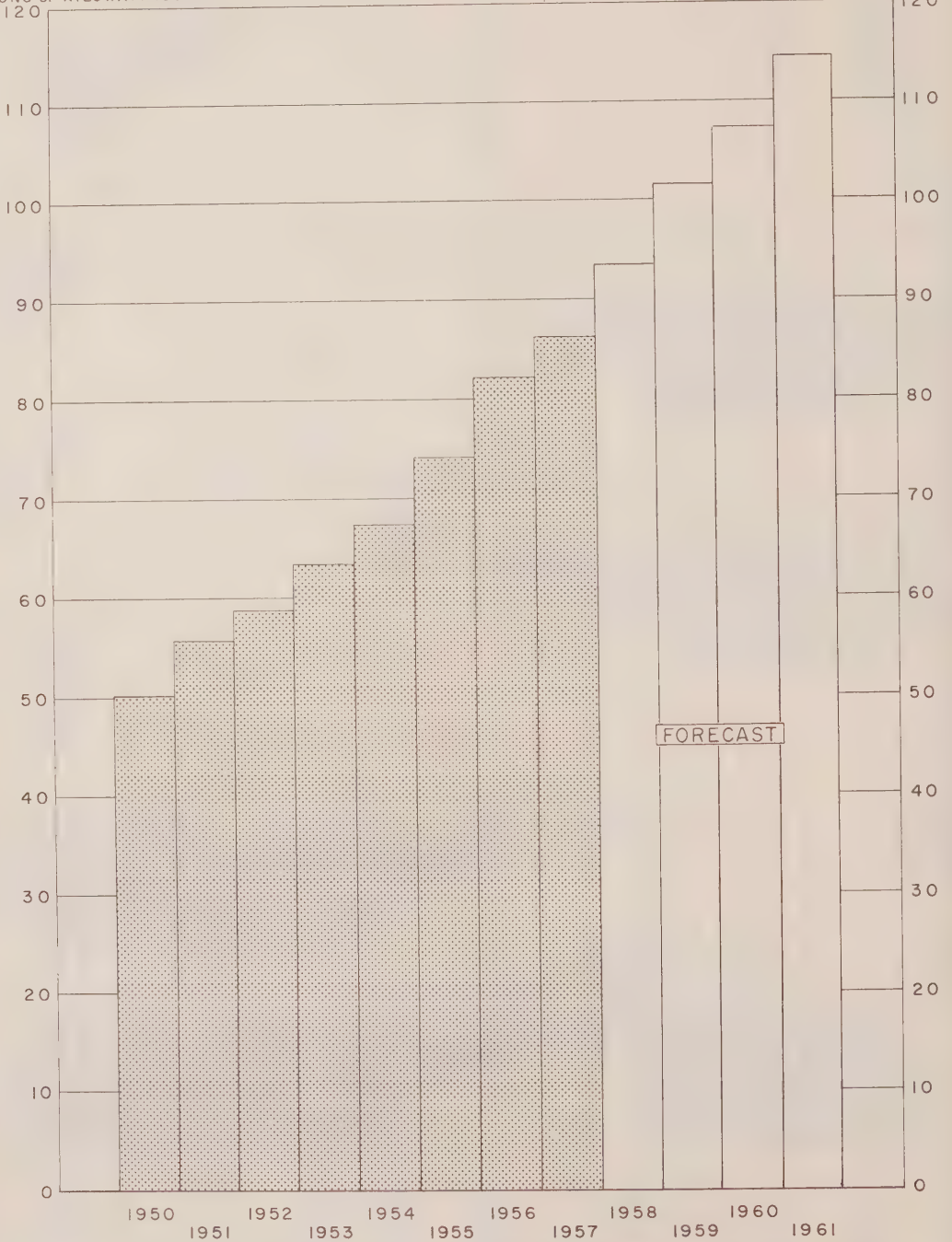


CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1950-1961

BILLIONS OF KILOWATTHOURS  
120

BILLIONS OF KILOWATTHOURS  
120



FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - CANADA\*

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	8,575	9,673	10,183	11,719	12,211	12,841	14,143	15,653	17,702	18,465	18,525
(b) Thermal	788	1,331	1,720	1,609	1,936	2,142	2,326	3,052	3,464	4,323	4,959
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	4	5	56	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	176	178	177	176	166	147	150	150	150	149	104
(b) United States	9,187	10,826	11,726	13,156	13,986	14,892	16,319	18,555	21,016	22,639	23,380
4. Net capability (1 + 2 - 3)											
								ACTUAL			
								FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Canada	8,313	9,941	10,553	11,355	12,472	13,870	14,923	16,043	17,146	18,345	19,529
6. Indicated shortage	217	3	80	4	64	47	2	-	-	-	-
7. Indicated demand within Canada (5 + 6)	8,530	9,944	10,633	11,359	12,536	13,917	14,925	16,043	17,146	18,345	19,529
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 657	+ 882	+ 1,093	+ 1,797	+ 1,450	+ 975	+ 1,394	+ 2,512	+ 3,870	+ 4,294	+ 3,851
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within Canada	49,635	58,760	63,437	67,331	73,754	80,679	85,697	93,682	101,635	108,236	114,478
10. Indicated shortage	378	46	3	11	378	1,546	636	-	-	-	-
11. Indicated firm energy requirement within Canada (9 + 10)	50,013	58,806	63,440	67,342	74,132	82,225	86,333	93,682	101,635	108,236	114,478
12. Deliveries of firm energy to:											
(a) Other provinces	1,418	1,398	1,378	1,357	1,332	1,226	1,172	1,160	1,157	1,154	964
(b) United States	1,418	1,398	1,378	1,357	1,332	1,226	1,172	1,160	1,157	1,154	964
(c) Total (a + b)	51,431	60,204	64,818	68,699	75,464	83,451	87,505	94,842	102,792	109,390	115,442
13. Firm energy requirement on Canada (11 + 12)											

\* Revised figures for earlier years are explained on pages 18, 19 and 21.



- 14 -

SUMMARY - NEWFOUNDLAND (including Labrador)

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	176	188	202	207	207	215	220	233	247	258	261
(b) Thermal	12	12	15	16	16	27	29	29	45	45	46
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	6	6	6	6	13	13
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	200	217	223	223	236	243	256	286	290	294
	ACTUAL							FORECAST			
FIRM POWER PEAK LOAD:											
5. Within province	177	186	195	201	206	222	222	234	247	258	266
6. Indicated shortage	-	-	-	1	1	2	-	-	-	-	-
7. Indicated demand within province (5 + 6)	177	186	195	202	207	224	222	234	247	258	266
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 11	+ 14	+ 22	+ 21	+ 16	+ 12	+ 21	+ 22	+ 39	+ 32	+ 28
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	1,058	1,157	1,190	1,225	1,289	1,374	1,333	1,461	1,526	1,616	1,725
10. Indicated shortage	-	-	-	9	10	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	1,058	1,157	1,190	1,234	1,299	1,374	1,333	1,461	1,526	1,616	1,725
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	31	46	51	57	93	93
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	31	46	51	57	93	93
13. Firm energy requirement on the province (11 + 12)	1,058	1,157	1,190	1,234	1,299	1,405	1,379	1,512	1,583	1,709	1,818



TABLE I  
SUMMARY - PRINCE EDWARD ISLAND  
Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	-	-	-	-	-	-	-	-	-	-	-
(b) Thermal	10	18	18	18	18	18	25	26	26	26	41
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	10	18	18	18	18	18	25	26	26	26	41
ACTUAL											
FIRM POWER PEAK LOAD:											
5. Within province	8	9	10	11	12	12	14	16	18	19	21
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	8	9	10	11	12	12	14	16	18	19	21
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 2	+ 9	+ 8	+ 7	+ 6	+ 6	+ 11	+ 10	+ 8	+ 7	+ 20
MILLIONS OF KILOWATT HOURS											
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	31	37	41	46	51	53	60	63	67	74	80
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	31	37	41	46	51	53	60	63	67	74	80
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	31	37	41	46	51	53	60	63	67	74	80

FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - NOVA SCOTIA

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	113	117	124	130	136	136	126	126	126	145	145
(b) Thermal	96	154	176	188	248	242	289	288	355	370	370
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	2	2	2	2	2	2	2	2	3	3	4
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	207	269	298	316	382	376	413	412	478	512	511
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	163	213	235	245	278	301	322	350	379	406	436
6. Indicated shortage	4	2	4	3	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	167	215	239	248	278	301	322	350	379	406	436
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 40	+ 54	+ 59	+ 68	+ 104	+ 75	+ 91	+ 62	+ 99	+ 106	+ 75
	MILLIONS OF KILOWATT HOURS							HOURS			
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	891	1,122	1,211	1,277	1,357	1,486	1,466	1,630	1,737	1,844	1,967
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	891	1,122	1,211	1,277	1,357	1,486	1,466	1,630	1,737	1,844	1,967
12. Deliveries of firm energy to:											
(a) Other provinces	6	7	7	7	8	8	8	10	11	12	13
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	6	7	7	7	8	8	8	10	11	12	13
13. Firm energy requirement on the province (11 + 12)	897	1,129	1,218	1,284	1,365	1,494	1,474	1,640	1,748	1,856	1,980

- 17

TABLE I

- 17

## FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

## SUMMARY - QUEBEC

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	4,370	4,877	5,300	5,378	5,583	5,854	6,406	6,827	8,223	8,796	8,892
(b) Thermal	26	28	35	35	36	36	55	58	60	60	70
2. Receipts of firm power from:											
(a) Other provinces	1	1	1	1	1	7	7	7	7	14	14
(b) United States	-	-	-	4	5	4	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces*	732	736	737	719	729	691	694	695	697	700	702
(b) United States	56	56	56	56	56	56	56	56	56	56	56
4. Net capability (1 + 2 - 3)	3,609	4,114	4,543	4,643	4,840	5,154	5,718	6,141	7,537	8,114	8,218
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	3,174	3,752	3,951	4,092	4,367	4,951	5,475	5,642	6,072	6,413	6,750
6. Indicated shortage	-	-	4	-	44	44	2	-	-	-	-
7. Indicated demand within province (5 + 6)	3,174	3,752	3,955	4,092	4,411	4,995	5,477	5,642	6,072	6,413	6,750
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 435	+ 362	+ 588	+ 551	+ 429	+ 159	+ 241	+ 499	+ 1,465	+ 1,701	+ 1,468
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	20,442	24,469	26,711	27,954	29,479	31,088	31,845	35,071	39,159	41,481	43,149
10. Indicated shortage	123	37	1	1	362	1,546	540	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	20,565	24,506	26,712	27,955	29,841	32,634	32,385	35,071	39,159	41,481	43,149
12. Deliveries of firm energy to:											
(a) Other provinces*	4,425	4,456	4,434	4,331	4,260	4,117	4,075	4,090	4,108	4,120	4,137
(b) United States	490	491	490	490	490	491	485	485	485	485	485
(c) Total (a + b)	4,915	4,947	4,924	4,821	4,750	4,608	4,560	4,575	4,593	4,605	4,622
13. Firm energy requirement on the province (11 + 12)	25,480	29,453	31,636	32,776	34,591	37,242	36,945	39,646	43,752	46,086	47,771

\* Includes deliveries supplied from Cedars on a short term basis. Figures for earlier years revised

## FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

- 19 -

TABLE I

## SUMMARY - ONTARIO

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST		
								1958	1959	1960
<b>CAPABILITY:</b>										
1. Net generating capability:										
(a) Hydro										
(b) Thermal	2,367	2,672	2,684	3,481	3,688	3,778	4,145	5,014	5,431	5,353
2. Receipts of firm power from:	199	590	809	607	800	787	787	992	1,189	1,567
(a) Other provinces**	741	745	746	732	741	702	658	671	696	700
(b) United States	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces	1	1	1	1	1	1	1	1	1	1
(b) United States	85	85	85	85	85	86	86	86	86	86
4. Net capability (1 + 2 - 3)	3,221	3,921	4,153	4,734	5,143	5,180	5,503	6,590	7,229	7,971
<b>FIRM POWER PEAK LOAD:</b>										
5. Within province	3,078	3,803	3,969	4,261	4,757	5,064	5,369	5,828	6,209	6,616
6. Indicated shortage	213	1	60	-	18	-	-	-	-	-
7. Indicated demand within province (5 + 6)	3,291	3,804	4,029	4,261	4,775	5,064	5,369	5,828	6,209	6,616
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	- 70	+ 117	+ 124	+ 473	+ 368	+ 116	+ 134	+ 762	+ 1,020	+ 993
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm energy requirement within province	18,016	21,630	22,985	23,928	26,376	28,875	30,768	33,063	35,196	37,545
10. Indicated shortage	255	9	2	1	6	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	18,271	21,639	22,987	23,929	26,382	28,875	30,768	33,063	35,196	37,545
12. Deliveries of firm energy to:										
(a) Other provinces	2	3	3	3	3	4	4	4	4	4
(b) United States	703	690	668	624	687	703	658	647	647	647
(c) Total (a + b)	705	693	671	627	690	707	662	651	651	651
13. Firm energy requirement on the province (11 + 12)	18,976	22,332	23,658	24,556	27,072	29,582	31,430	33,714	35,847	38,196
** Quebec power sold to the United States but diverted to Ontario at Cedars formerly treated as imported from United States now treated as received from Quebec. Earlier years revised.										



## FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - MANITOBA  
Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	418	487	487	522	547	556	561	561	561	561	561
(b) Thermal	10	10	23	46	46	46	78	168	168	231	231
2. Receipts of firm power from:											
(a) Other provinces	68	79	79	80	79	64	69	69	74	74	74
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	9	9	9	13	14	14	14	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	487	567	580	635	658	652	694	798	803	866	866
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	419	460	512	533	594	605	608	685	730	770	810
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	419	460	512	533	594	605	608	685	730	770	810
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 68	+ 107	+ 68	+ 102	+ 64	+ 47	+ 86	+ 113	+ 73	+ 96	+ 56
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:*</b>											
9. Firm energy requirement within province	2,218	2,559	2,705	2,886	3,122	3,414	3,435	3,634	3,884	4,084	4,284
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	2,218	2,559	2,705	2,886	3,122	3,414	3,435	3,634	3,884	4,084	4,284
12. Deliveries of firm energy to:											
(a) Other provinces	79	79	79	114	114	94	136	70	30	30	30
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	79	79	79	114	114	94	136	70	30	30	30
13. Firm energy requirement on the province (11 + 12)	2,297	2,638	2,784	3,000	3,236	3,508	3,571	3,704	3,914	4,114	4,314

\* See note on page 21.

TABLE I

## SUMMARY - SASKATCHEWAN

Thousands of kilowatts

CAPABILITY:											
	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
1. Net generating capability:											
(a) Hydro	85	85	85	85	82	82	87	87	87	87	87
(b) Thermal	129	172	197	243	257	320	376	455	587	679	679
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	1	2	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	68	79	79	80	79	64	72	72	77	77	77
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)											
	146	178	203	248	260	338	391	471	599	689	689
ACTUAL											
FIRM POWER PEAK LOAD:											
5. Within province	128	144	169	196	227	278	299	342	389	440	493
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)											
	128	144	169	196	227	278	299	342	389	440	493
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 18	+ 34	+ 34	+ 52	+ 33	+ 60	+ 92	+ 129	+ 210	+ 249	+ 196
MILLIONS OF KILOWATT HOURS											
FIRM ENERGY REQUIREMENT: *											
9. Firm energy requirement within province	405	550	629	742	877	1,047	1,276	1,458	1,650	1,859	2,083
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)											
	405	550	629	742	877	1,047	1,276	1,458	1,650	1,859	2,083
12. Deliveries of firm energy to:											
(a) Other provinces	500	542	559	558	571	554	503	503	553	553	553
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	500	542	559	558	571	554	503	503	553	553	553
13. Firm energy requirement on the province (11 + 12)											
	905	1,092	1,188	1,300	1,448	1,601	1,779	1,961	2,203	2,412	2,636

\* Figures revised, transferring to Manitoba some energy requirement formerly included in Saskatchewan.

\* Figures revised, transferring to Manitoba some energy requirement formerly included with Saskatchewan in error.

FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - ALBERTA

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	83	162	162	202	220	220	238	238	238	318	318
(b) Thermal	108	119	187	194	238	338	350	494	500	575	578
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	4	-	4	4	4	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	3	7	8	-	3	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	274	341	400	455	562	592	736	736	893	896
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	176	233	284	313	391	451	476	544	602	665	730
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	176	233	284	313	391	451	476	544	602	665	730
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 12	+ 41	+ 57	+ 87	+ 64	+ 111	+ 116	+ 192	+ 136	+ 228	+ 166
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	1,023	1,167	1,372	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	1,023	1,167	1,372	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426
12. Deliveries of firm energy to:											
(a) Other provinces	14	30	6	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	14	30	6	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	1,037	1,197	1,378	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426

TABLE I

## SUMMARY - BRITISH COLUMBIA

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	F O R E C A S T			
								1958	1959	1960	1961
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	852	969	1,003	1,578	1,614	1,866	2,187	2,347	2,569	2,644	2,683
(b) Thermal	96	114	128	130	133	153	163	348	339	524	688
2. Receipts of firm power from:											
(a) Other provinces	3	7	8	-	3	-	-	-	-	-	-
(b) United States	-	-	-	-	-	52	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	4	-	4	4	4	-	-	-
(b) United States	30	30	30	30	20	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	921	1,060	1,109	1,674	1,730	2,067	2,346	2,691	2,908	3,168	3,371
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	799	932	1,010	1,275	1,386	1,724	1,861	2,100	2,178	2,411	2,613
6. Indicated shortage	-	-	12	-	-	1	-	-	-	-	-
7. Indicated demand within province (5 + 6)	799	932	1,022	1,275	1,386	1,725	1,861	2,100	2,178	2,411	2,613
8. Difference (4 - 7)	+ 122	+ 128	+ 87	+ 399	+ 344	+ 342	+ 485	+ 591	+ 730	+ 757	+ 758
<b>INDICATED RESERVE:</b>											
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	4,523	4,979	5,466	6,414	8,011	9,802	11,642	13,076	13,836	14,735	15,890
10. Indicated shortage	-	-	-	-	-	-	40	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	4,523	4,979	5,466	6,414	8,011	9,802	11,682	13,076	13,836	14,735	15,890
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	10	10	10	9	9	9	9	9
(b) United States	184	184	184	184	122	-	-	-	-	-	-
(c) Total (a + b)	184	184	184	194	132	10	9	9	9	9	9
13. Firm energy requirement on the province (11 + 12)	4,707	5,163	5,650	6,608	8,143	9,812	11,691	13,085	13,845	14,744	15,899

FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - YUKON AND NORTH WEST TERRITORIES

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST			
								1958	1959	1960	1961
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	21	24	24	24	22	22	25	36	36	41	41
(b) Thermal	-	-	-	-	-	1	1	1	2	3	3
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	21	24	24	24	22	23	26	37	38	44	44
ACTUAL											
FIRM POWER PEAK LOAD:											
5. Within province	14	16	17	18	19	19	19	29	32	35	35
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	14	16	17	18	19	19	19	29	32	35	35
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 7	+ 8	+ 7	+ 6	+ 3	+ 4	+ 7	+ 8	+ 6	+ 9	+ 9
MILLIONS OF KILOWATT HOURS											
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	67	66	83	89	96	98	115	125	171	177	186
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	67	66	83	89	96	98	115	125	171	177	186
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	67	66	83	89	96	98	115	125	171	177	186



FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE II

NET GENERATING CAPABILITY WITHIN PROVINCES\*

Thousands of Kilowatts

P R O V I N C E	F O R E C A S T							P E R C E N T A G E C H A N G E						
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953-1957	1957-1961	1953-1961
Newfoundland (including Labrador)	188	200	217	223	223	242	249	262	292	303	307	14.7	23.3	41.5
Prince Edward Island	10	18	18	18	18	18	25	26	26	26	41	38.9	64.0	127.8
Nova Scotia	209	271	300	318	384	378	415	414	481	515	515	38.3	24.1	71.7
New Brunswick	192	206	244	244	256	286	321	377	377	427	477	31.6	48.6	95.5
Quebec	4,396	4,905	5,335	5,413	5,619	5,890	6,461	6,885	8,283	8,856	8,962	21.1	38.7	68.0
Ontario	2,566	3,262	3,493	4,088	4,488	4,565	4,932	6,006	6,620	6,998	7,313	41.2	48.3	109.4
Manitoba	428	497	510	568	593	602	639	729	729	792	792	25.3	23.9	55.3
Saskatchewan	214	257	282	328	339	402	463	542	674	766	766	64.2	65.4	171.6
Alberta	191	281	349	396	458	558	588	732	738	893	896	68.5	52.4	156.7
British Columbia	948	1,083	1,131	1,708	1,747	2,019	2,350	2,695	2,908	3,168	3,371	107.8	43.4	198.1
Yukon and N.W.T.	21	24	24	24	22	23	26	37	38	44	44	8.3	69.2	83.3
Canada	9,363	11,004	11,903	13,328	14,147	14,983	16,469	18,705	21,166	22,788	23,484	38.4	42.6	97.3

\* Hydro plus thermal (Table I, item 1a + 1b)

FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES\*

Thousands of Kilowatts

P R O V I N C E	F O R E C A S T							P E R C E N T A G E   C H A N G E						
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953- 1957	1957- 1961	1953- 1961
Newfoundland (including Labrador)	177	186	195	202	207	224	222	234	247	258	266	13.8	19.8	36.4
Prince Edward Island	8	9	10	11	12	12	14	16	18	19	21	40.0	50.0	110.0
Nova Scotia	167	215	239	248	278	301	322	350	379	406	436	34.7	35.4	82.4
New Brunswick	177	193	201	210	236	243	258	273	290	312	395	28.4	53.1	96.5
Quebec	3,174	3,752	3,955	4,092	4,411	4,995	5,477	5,642	6,072	6,413	6,750	38.5	23.2	70.7
Ontario	3,291	3,804	4,029	4,261	4,775	5,064	5,369	5,828	6,209	6,616	6,980	33.3	30.0	73.2
Manitoba	419	460	512	533	594	605	608	685	730	770	810	18.8	33.2	58.2
Saskatchewan	128	144	169	196	227	278	299	342	389	440	493	76.9	64.9	191.7
Alberta	176	233	284	313	391	451	476	544	602	665	730	67.6	53.4	157.0
British Columbia	799	932	1,022	1,275	1,386	1,725	1,861	2,100	2,178	2,411	2,613	82.1	40.4	155.7
Yukon and N.W.T.	14	16	17	18	19	19	19	29	32	35	35	11.8	84.2	105.9
Canada	8,530	9,944	10,633	11,359	12,536	13,917	14,925	16,043	17,146	18,345	19,529	40.4	30.8	83.7

\* Indicated Firm Demand (Table I, item 7)

## FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE IV

## FIRM ENERGY REQUIREMENT WITHIN PROVINCES\*

Millions of Kilowatt Hours

P R O V I N C E	F O R E C A S T							P E R C E N T A G E C H A N G E						
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953-1957	1957-1961	1953-1961
Newfoundland (Including Labrador)	1,058	1,157	1,190	1,234	1,299	1,374	1,333	1,461	1,526	1,616	1,725	12.0	29.4	45.0
Prince Edward Island	31	37	41	46	51	53	60	63	67	74	80	46.3	33.3	95.1
Nova Scotia	891	1,122	1,211	1,277	1,357	1,486	1,466	1,630	1,737	1,844	1,967	21.1	34.2	62.4
New Brunswick	961	1,024	1,044	1,189	1,237	1,262	1,389	1,463	1,552	1,695	2,266	33.0	63.1	117.0
Quebec	20,565	24,506	26,712	27,955	29,841	32,634	32,385	35,071	39,159	41,481	43,149	21.2	33.2	61.5
Ontario	18,271	21,639	22,987	23,929	26,382	28,875	30,768	33,063	35,196	37,545	39,422	33.8	28.1	71.5
Manitoba**	2,218	2,559	2,705	2,886	3,122	3,414	3,435	3,634	3,884	4,084	4,284	27.0	24.7	58.4
Saskatchewan**	405	550	629	742	877	1,047	1,276	1,458	1,650	1,859	2,083	102.9	63.2	231.2
Alberta	1,023	1,167	1,372	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426	76.7	41.3	149.7
British Columbia	4,523	4,979	5,466	6,414	8,011	9,802	11,682	13,076	13,836	14,735	15,890	113.7	36.0	190.7
Yukon and N.W.T.	67	66	83	89	96	98	115	125	171	177	186	38.6	61.7	124.1
Canada	50,013	58,806	63,440	67,342	74,132	82,225	86,333	93,682	101,635	108,236	114,478	36.1	32.6	80.5

\* Table I item 11.

\*\* Revised

FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

	F O R E C A S T							P E R C E N T A G E C H A N G E					
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953-1957	1957-1961
Newfoundland (including Labrador)													
1. Gross capability	188	200	217	223	223	242	249	262	292	303	307	14.7	23.3
2. Total firm demand on the province	177	186	195	202	207	230	228	240	253	271	279	16.9	22.4
3. Indicated reserve (1-2)	11	14	22	21	16	12	21	22	39	32	28	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.2	7.5	11.2	10.4	7.7	5.2	9.2	9.2	15.4	11.8	10.0	xxx	xxx
Prince Edward Island													
1. Gross capability	10	18	18	18	18	18	25	26	26	26	41	38.9	64.0
2. Total firm demand on the province	8	9	10	11	12	12	14	16	18	19	21	40.0	50.0
3. Indicated reserve (1-2)	2	9	8	7	6	6	11	10	8	7	20	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	25.0	100.0	80.0	63.6	50.0	50.0	78.6	62.5	44.4	36.8	95.2	xxx	xxx
Nova Scotia													
1. Gross capability	209	271	300	318	384	378	415	414	481	515	515	38.3	24.1
2. Total firm demand on the province	169	217	241	250	280	303	324	352	382	409	440	34.4	35.8
3. Indicated reserve (1-2)	40	54	59	68	104	75	91	62	99	106	75	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	23.7	24.9	24.5	27.2	37.1	24.8	28.1	17.6	25.9	26.0	17.0	xxx	xxx
New Brunswick													
1. Gross capability	194	208	246	246	260	291	326	382	382	432	482	32.5	47.9
2. Total firm demand on the province	182	200	207	215	241	248	266	281	298	319	402	28.5	51.1
3. Indicated reserve (1-2)	12	8	39	31	19	43	60	101	84	113	80	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.6	4.0	18.8	14.4	7.9	17.3	22.6	36.0	28.2	35.4	19.9	xxx	xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

## FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

## INDICATED RESERVE\*

Thousands of Kilowatts

	1950	1952	1953	1954	1955	1956	1957	FORECAST				PERCENTAGE CHANGE		
								1958	1959	1960	1961	1953-1957	1957-1961	
Quebec														
1. Gross capability	4,397	4,906	5,336	5,418	5,625	5,901	6,468	6,892	8,290	8,870	8,976	21.2	38.8	68.2
2. Total firm demand on the province	3,962	4,544	4,748	4,867	5,196	5,742	6,227	6,393	6,825	7,169	7,508	31.1	20.6	58.1
3. Indicated reserve (1-2)	435	362	588	551	429	159	241	499	1,465	1,701	1,468	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	11.0	8.0	12.4	11.3	8.3	2.8	3.9	7.8	21.5	23.7	19.6	xxx	xxx	xxx
Ontario														
1. Gross capability	3,307	4,007	4,239	4,820	5,229	5,267	5,590	6,677	7,316	7,696	8,013	31.9	43.3	89.0
2. Total firm demand on the province	3,377	3,890	4,115	4,347	4,861	5,151	5,456	5,915	6,296	6,703	7,022	32.6	28.7	70.6
3. Indicated reserve (1-2)	- 70	117	124	473	368	116	134	762	1,020	993	991	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	-	3.1	3.1	11.1	7.7	2.3	2.5	12.9	16.2	14.8	14.1	xxx	xxx	xxx
Manitoba														
1. Gross capability	496	576	589	648	672	666	708	798	803	866	866	20.2	22.3	47.0
2. Total firm demand on the province	428	469	521	546	608	619	622	685	730	770	810	19.4	30.2	55.5
3. Indicated reserve (1-2)	68	107	68	102	64	47	86	113	73	96	56	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	15.9	22.8	13.1	18.7	10.5	7.6	13.8	16.5	10.0	12.5	6.9	xxx	xxx	xxx
Saskatchewan														
1. Gross capability	214	257	282	328	339	402	463	543	676	766	766	64.2	65.4	171.6
2. Total firm demand on the province	196	223	248	276	306	342	371	414	466	517	570	49.6	53.6	129.8
3. Indicated reserve (1-2)	18	34	34	52	33	60	92	129	210	249	196	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	20.0	18.8	16.8	21.3	12.0	17.5	24.8	31.2	45.1	48.2	34.4	xxx	xxx	xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3)



## FOURTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

	F O R E C A S T							P E R C E N T A G E C H A N G E						
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953- 1957	1957- 1961	1953- 1961
Alberta														
1. Gross capability	191	281	349	400	458	562	592	736	738	893	896	69.6	51.4	156.7
2. Total firm demand on the province	179	240	292	313	394	451	476	544	602	665	730	63.0	53.4	150.0
3. Indicated reserve (1-2)	12	41	57	87	64	111	116	192	136	228	166	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.7	17.1	19.5	27.8	16.2	24.6	24.4	35.3	22.6	34.3	22.7	xxx	xxx	xxx
British Columbia														
1. Gross capability	951	1,090	1,139	1,708	1,750	2,071	2,350	2,695	2,908	3,168	3,371	106.3	43.4	196.0
2. Total firm demand on the province	829	962	1,052	1,309	1,406	1,729	1,865	2,104	2,178	2,411	2,613	77.3	40.1	148.4
3. Indicated reserve (1-2)	122	128	87	399	344	342	485	591	730	757	758	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	14.7	13.3	8.3	30.5	24.5	19.8	26.0	28.1	33.5	31.4	29.0	xxx	xxx	xxx
Yukon and N.W.T.														
1. Gross capability	21	24	24	24	22	23	26	37	38	44	44	8.3	69.2	83.3
2. Total firm demand on the province	14	16	17	18	19	19	19	29	32	35	35	11.8	84.2	105.9
3. Indicated reserve (1-2)	7	8	7	6	3	4	7	8	6	9	9	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	50.0	50.0	41.2	33.3	15.8	21.1	36.8	27.6	18.8	25.7	25.7	xxx	xxx	xxx
Canada														
1. Gross capability	9,363	11,004	11,903	13,332	14,152	15,039	16,469	18,705	21,166	22,788	23,484	38.4	42.6	97.3
2. Total firm demand on Canada	8,706	10,122	10,810	11,535	12,702	14,064	15,075	16,193	17,296	18,494	19,633	39.5	30.2	81.6
3. Indicated reserve (1-2)	657	882	1,093	1,797	1,450	975	1,394	2,512	3,870	4,294	3,851	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	7.5	8.7	10.1	15.6	11.4	6.9	9.2	15.5	22.4	23.2	19.6	xxx	xxx	xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3)

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3)

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Members of the Surveys Sub-Committee serve as area representatives. The function of an area representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey. For this reason area representatives must have the complete co-operation of company representatives in securing the information required for the power survey.







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*Fifth*  
ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

1958 Actual  
1959 - 1962 Forecast

DOMINION BUREAU OF STATISTICS  
Public Finance and Transportation Division  
Transportation and Public Utilities Section



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*Fifth*  
ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

1958 Actual  
1959 - 1962 Forecast

*Published by Authority of*  
The Honourable Gordon Churchill, Minister of Trade and Commerce

Publications prepared in the Public Finance and Transportation Division  
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## TABLE OF CONTENTS

	<u>Page</u>
Introduction .....	1
Review of Survey Results .....	2
Definitions .....	5
Chart A: Net Generating Capability within Canada, 1950 through 1962 .....	6
Chart B: Net Capability and Firm Demand within Canada, 1950 through 1962 .....	7
Chart C: Net Generating Capability within Provinces, 1950 through 1962 .....	9
Chart D: Net Capability and Firm Demand within Provinces, 1950 through 1962 .....	10
Chart E: Firm Energy Requirement within Canada, 1950 through 1962 .....	12
Table I: Summary by Provinces and Canada, 1950, 1953 through 1962 .....	13
Table II: Net Generating Capability within Provinces, 1950, 1953 through 1962 .....	25
Table III: Firm Power Peak Load Within Provinces, 1950, 1953 through 1962 .....	26
Table IV: Firm Energy Requirement within Provinces, 1950, 1953 through 1962 .....	27
Table V: Indicated Reserve, 1950, 1953 through 1962 .....	28
Canadian Electrical Association Policy Sub-Committee .....	31
Surveys Sub-Committee .....	32





## Introduction

This report presents the results of the fifth annual Electric Power Survey of Capability and Load which was conducted in March 1959 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate 10,000,000 kilowatt hours or more per annum. The 1959 report is based on returns from 130 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 130 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1953 - 1962 inclusive, the latter four years on a forecast basis. Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load, load being calculated in terms of contractual commitments for firm power.

Generating capability is the maximum output that can be maintained at time of annual firm power peak load. Net generating capability refers to the amount left after power used in station service is deducted. It is calculated on the basis of actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed capacity a term used in reference to the name plate ratings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table I) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

## Review of Survey Results

Net Generating Capability: Total net generating capability in Canada in 1958 amounted to 18,628,000 kilowatts, an increase of 13.1 per cent over the 1957 total of 16,469,000 kilowatts. Further annual increases totalling 28.8 per cent over the next four years are expected to result in a net generating capability in 1962 of 23,999,000 kilowatts. The proportion of thermal generation to the total is expected to rise from 14.6 per cent in 1958 to 22.9 per cent in 1962.

Firm Power Peak Load: Firm power peak load within Canada in 1958 was 15,485,000 kilowatts, an increase of 3.8 per cent over the 1957 total of 14,925,000. The forecast for 1962 is 20,137,000 kilowatts, an estimated rise of 30.0 per cent.

Indicated Reserve: The indicated reserve for Canada rose to 2,991,000 kilowatts from 1,394,000 in 1957. By 1962, it will have risen to 3,756,000 kilowatts, a reserve equivalent to 18.6 per cent of firm demand as compared with this year's 19.1 per cent.

Firm Energy Requirement: Firm energy requirement rose 1.0 per cent in 1958 to 87,173,000,000 kilowatt hours from 86,333,000,000 in 1957. A rise of 7.6 per cent to 93,841,000,000 kilowatt hours is forecast for 1959 and an increase of 33.7 per cent to 116,545,000,000 for 1962.

Table I - Summary (Pages 13 to 24): This table presents capability, firm power peak load, indicated reserve and firm energy requirement summarized for Canada and for each of the provinces. Tables II - V compare provincial rates of growth in each of these categories with that for Canada as a whole.

Table II - Net Generating Capability Within Provinces (Page 25): During the four-year period ended 1958 net generating capability in Canada increased 39.8 per cent to 18,628,000 kilowatts from 13,328,000. A further rise of 28.8 per cent to 23,999,000 kilowatts is forecast for the next four years. Provincial rates of increase based on actual and forecast data for the period 1954-1962 range from a high of 182.3 per cent in Alberta to a low of 42.2 per cent in Newfoundland, the comparable figure for all Canada being 80.1 per cent.

Table III - Firm Power Peak Load Within Provinces (Page 26): Firm power peak load is expected to rise 30.0 per cent during the next four years compared with an actual increase of 36.3 per cent between 1954 and 1958. In the eight-year period 1954-1958 a growth in firm power peak load of 183.2 per cent is indicated in Saskatchewan and 181.2 per cent in Alberta. The forecast increase for all Canada is 77.3 per cent to 20,137,000 kilowatts from 11,359,000.

Table IV - Firm Energy Requirement Within Provinces (Page 27): In contrast to the decline in the rates of growth forecast for net generating capability and firm power peak load for the next four years, firm energy requirement is expected to rise 33.7 per cent between 1958-1962 compared with an actual increase of 29.4 per cent between 1954 and 1958. The eight-year increase of 73.1 per cent forecast for all Canada compares with a rise of 199.9 per cent forecast for Saskatchewan, 159.5 per cent for Alberta and 140.8 per cent for British Columbia.

Table V - Indicated Reserve (Page 28): This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power delivered

outside the province. Gross capability consists of net generating capability (hydro and thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm demand is the indicated reserve, and this, expressed as a percentage of total firm demand, can be used as a measurement of the industry's ability to satisfy demand and meet contingencies.

For Canada as a whole the reserve is expected to rise from a low of 6.9 per cent in 1956 to a high of 27.8 per cent in 1960 and then decline to 18.6 per cent in 1962. In 1958, it rose to 19.1 per cent from the year earlier figure of 9.2 per cent. Reserves for individual provinces in 1958 varied from a high of 62.5 per cent in Prince Edward Island to a low of 11.4 per cent in Ontario. Since not all systems are fully interconnected it should be remembered that reserves of power cannot always be completely utilized.

Charts: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

Chart A - Net Generating Capability Within Canada (Page 6): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation is expected to increase from 1,609,000 kilowatts or 12.1 per cent of the net generating capability within Canada in 1954 to 5,494,000 kilowatts or 22.9 per cent in 1962.

Chart B - Net Capability and Firm Demand Within Canada (Page 7): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart C - Net Generating Capability Within Provinces (Pages 8 - 9): Chart C illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.

Chart D - Net Capability and Firm Demand Within Provinces (Pages 10 - 11): This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement Within Canada (Page 12): Chart E shows the growth in Canadian firm energy requirement during the period 1950 - 1962.





## DEFINITIONS

### NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

### FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

### FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept and deliver power on an irrevocable basis.

### NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

### FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT.

### INDICATED DEMAND

The sum of firm power peak load and indicated shortage

### INDICATED RESERVE

Net capability less indicated demand (+ or -).

### SYSTEM

Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

### UTILITY

The Company, Commission, or UTILITY reporting or included in a SYSTEM report under Section IV (which generates at least part of its own power).

### INDUSTRIAL ESTABLISHMENT

A firm which generates power primarily for use in own plants.

CHART - A

# NET GENERATING CAPABILITY WITHIN CANADA

1950 - 1962

THOUSANDS OF KILOWATTS  
26,000

THOUSANDS OF KILOWATTS  
26,000

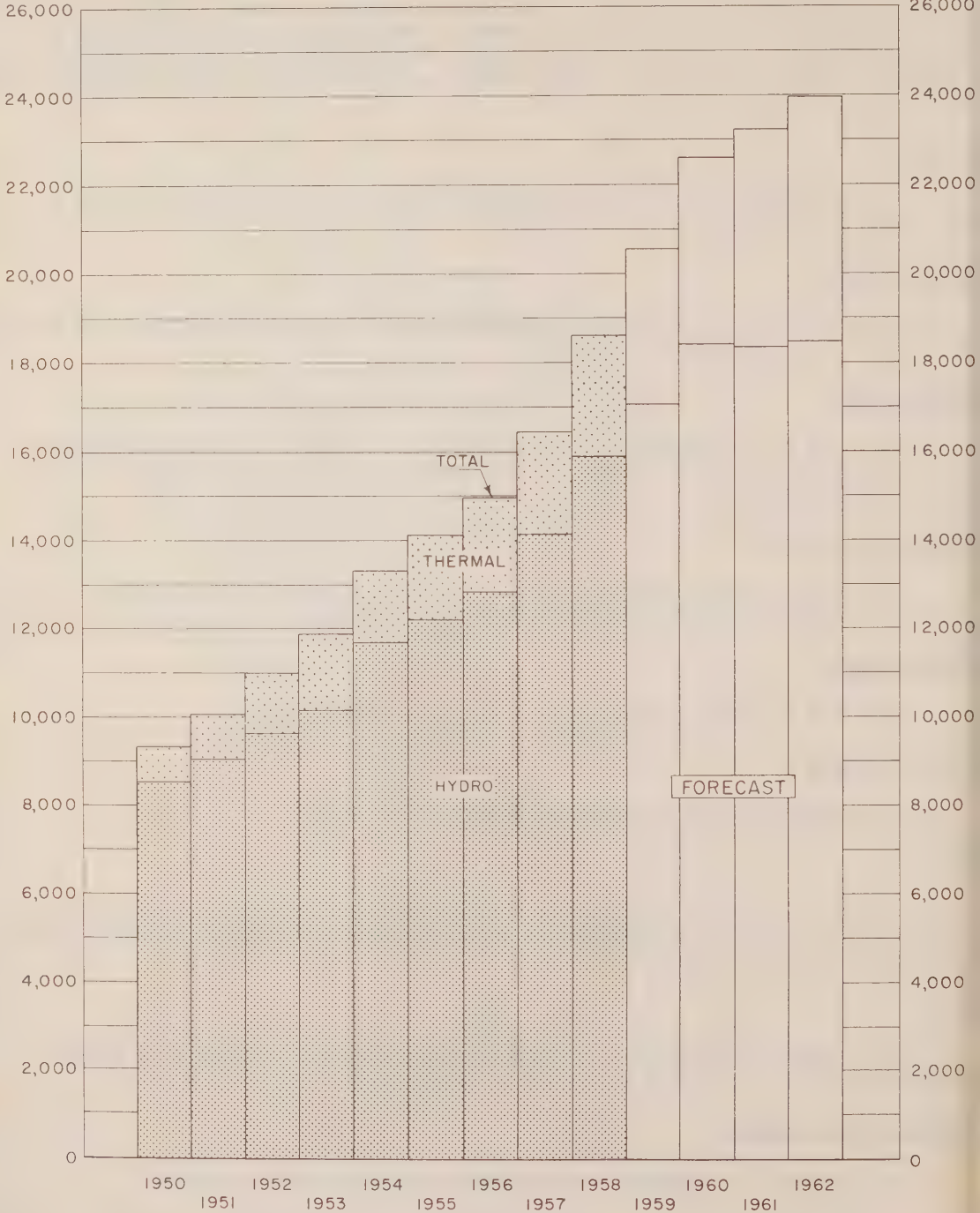


CHART-B

# NET CAPABILITY AND FIRM DEMAND WITHIN CANADA 1950 - 1962

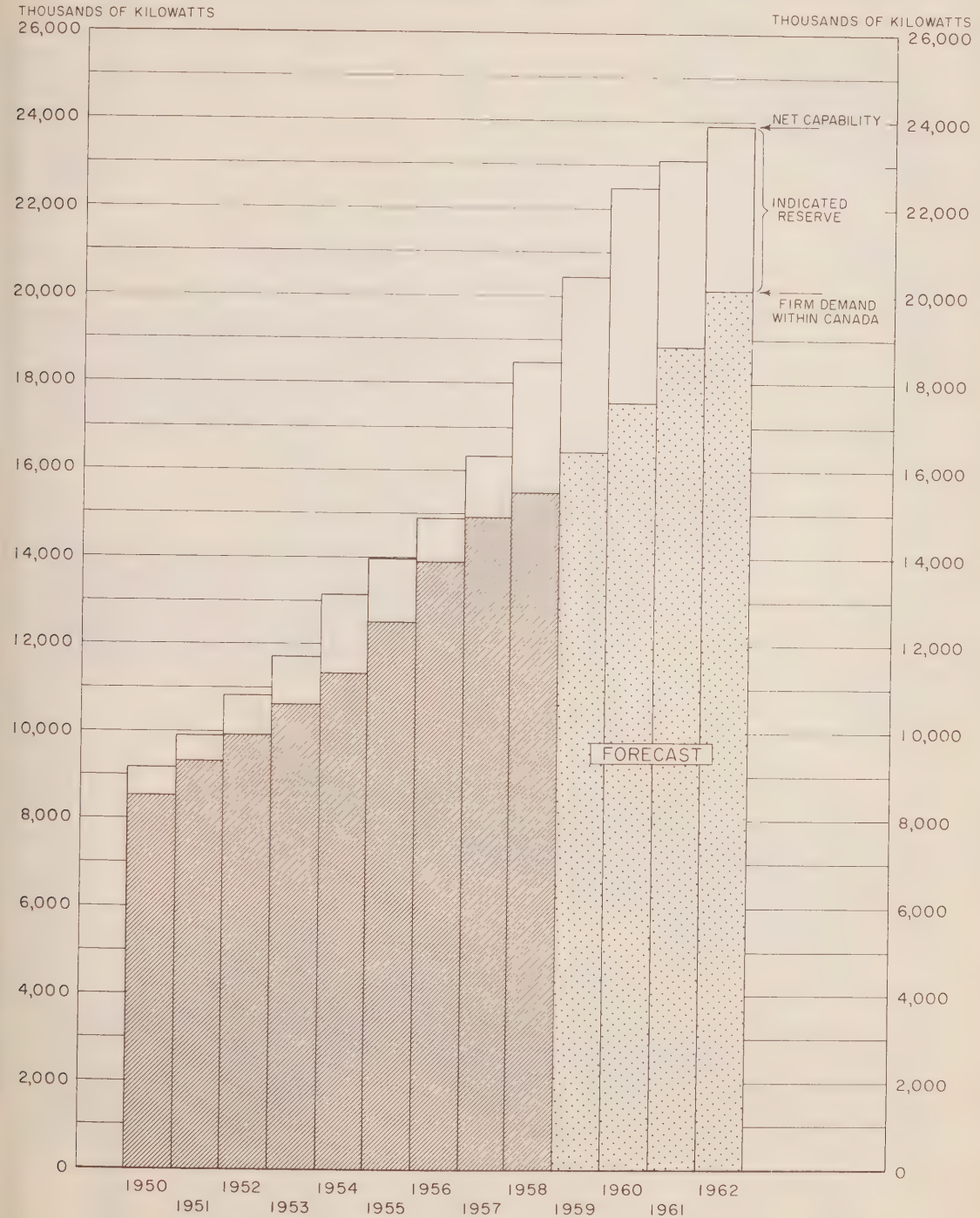
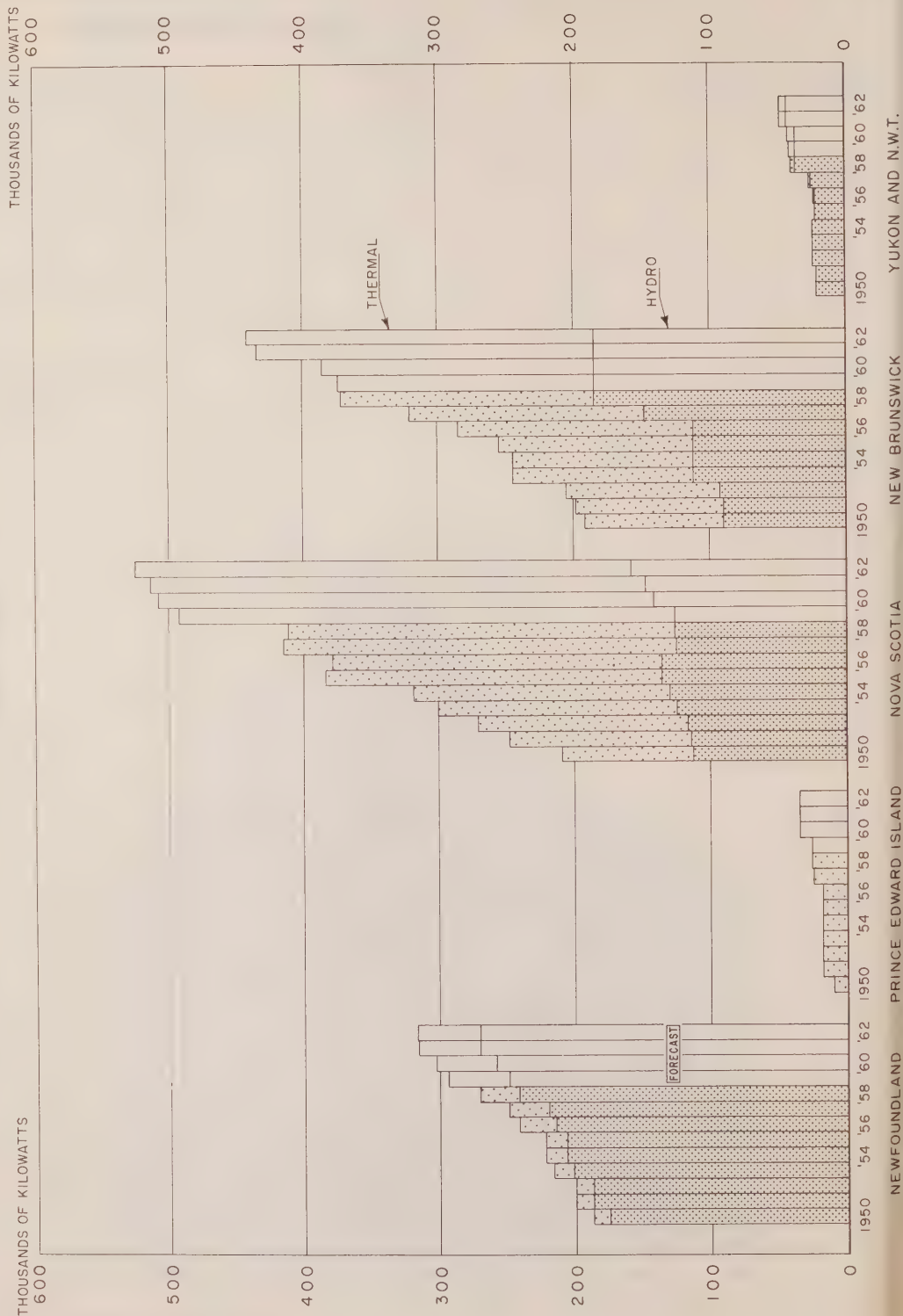


CHART - C

# NET GENERATING CAPABILITY WITHIN PROVINCES

1950 - 1962





# NET GENERATING CAPABILITY WITHIN PROVINCES

1950 - 1962

CHART - C

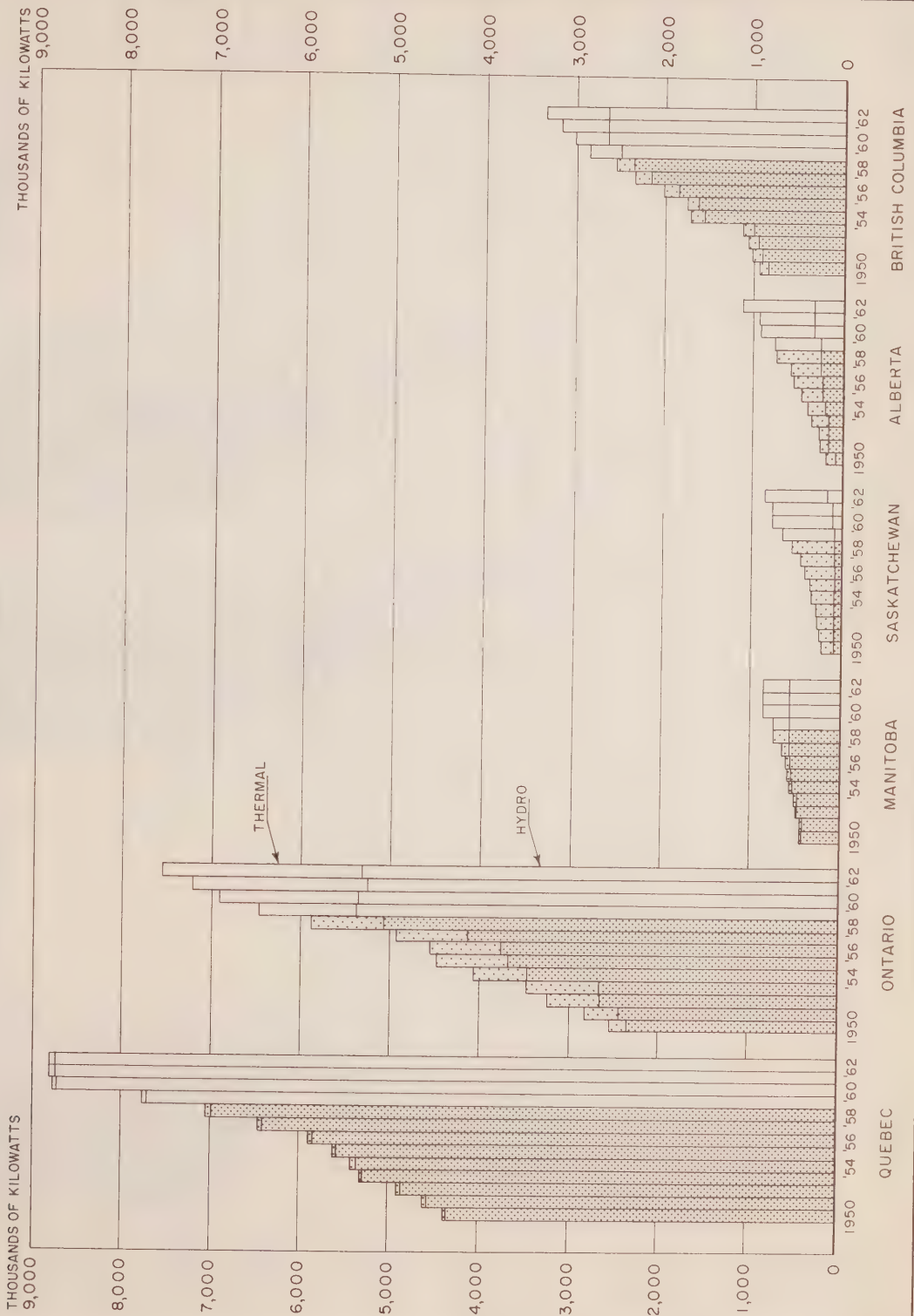
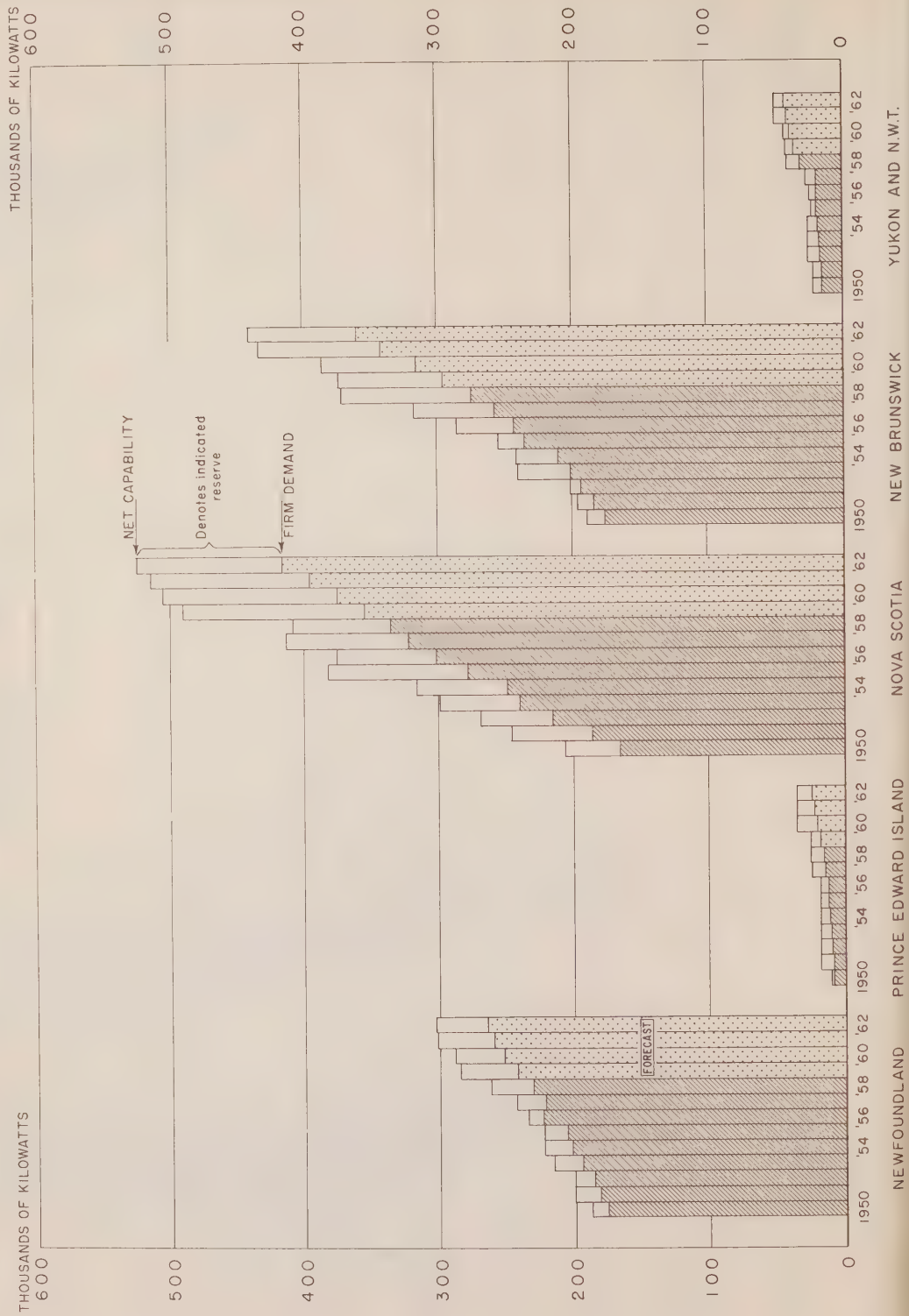




CHART - D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1950 - 1962



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1950-1962

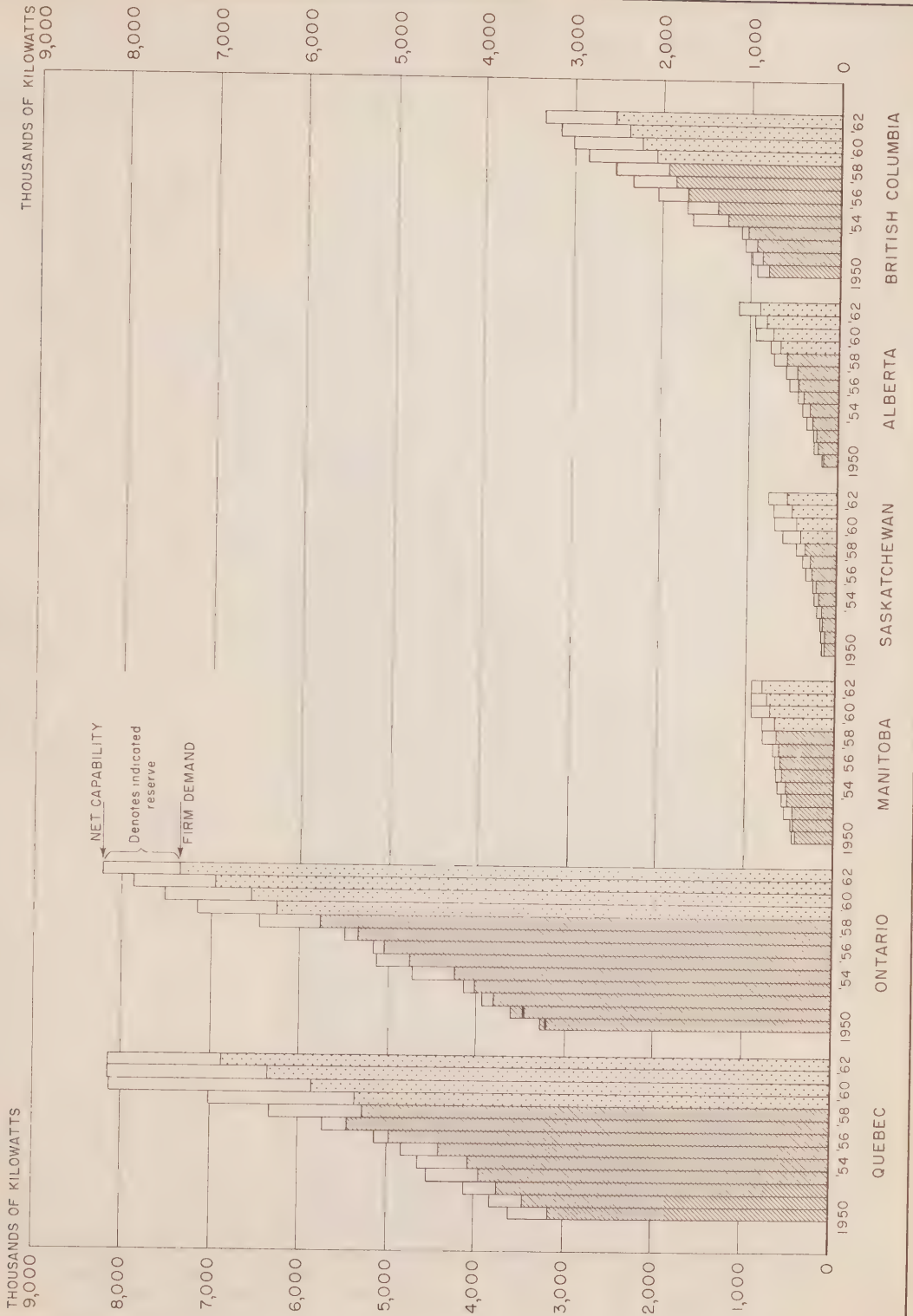
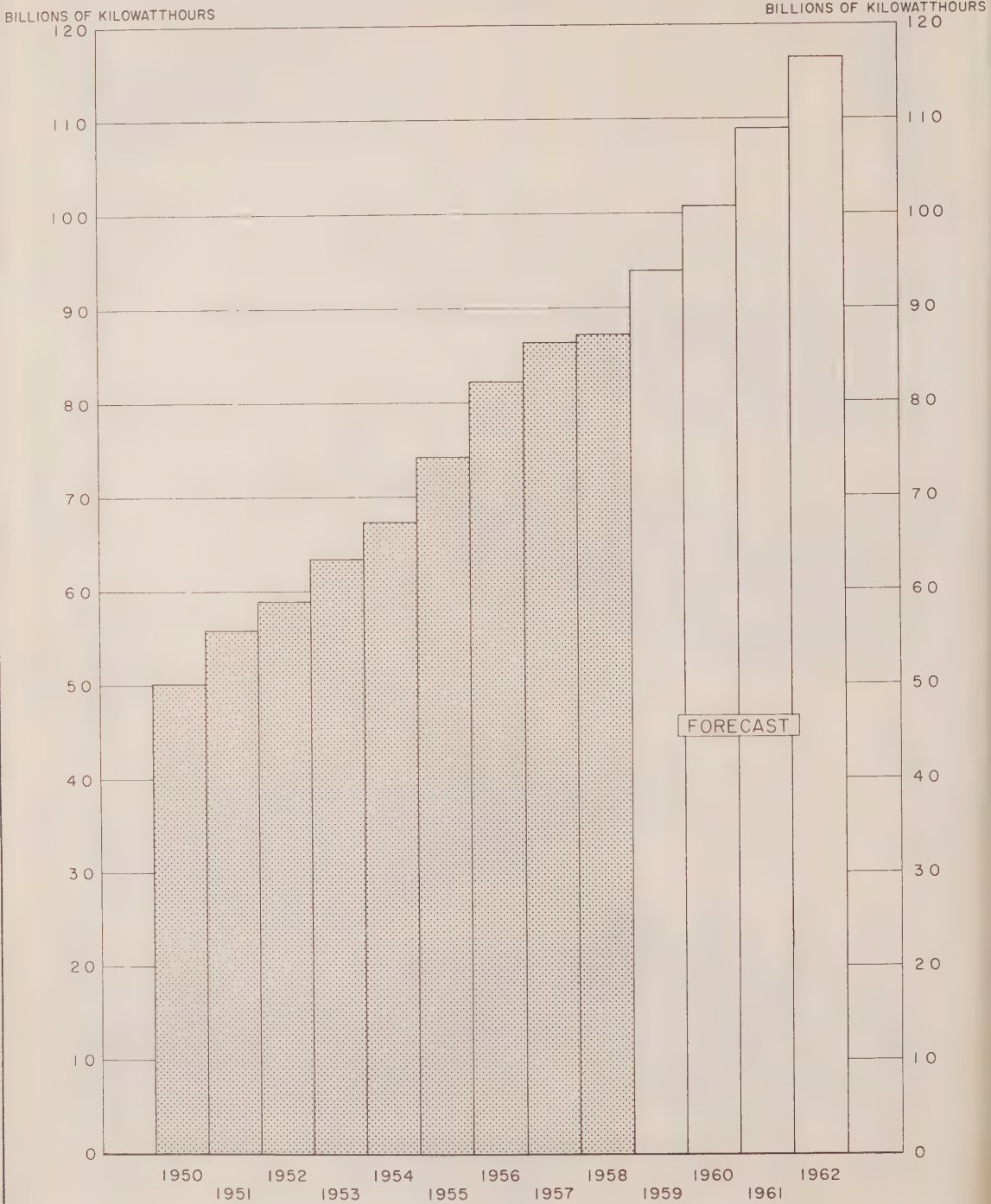


CHART - E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1950-1962



SUMMARY — CANADA

Thousands of kilowatts

		1950	1953	1954	1955	1956	1957	1958	FORECAST			
									1959	1960	1961	1962
CAPABILITY:												
1. Net generating capability:												
	(a) Hydro	8,575	10,183	11,719	12,211	12,841	14,143	15,912	17,074	18,419	18,376	18,505
	(b) Thermal	788	1,720	1,609	1,936	2,142	2,326	2,716	3,512	4,218	4,855	5,494
2. Receipts of firm power from:												
	(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
	(b) United States	-	-	4	5	56	-	-	-	-	-	-
3. Deliveries of firm power to:												
	(a) Other provinces	176	177	176	166	147	150	152	152	152	106	106
	(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)												
		9,187	11,726	13,156	13,986	14,892	16,319	18,476	20,434	22,485	23,125	23,893
FIRM POWER PEAK LOAD:												
5. Within Canada												
		8,313	10,553	11,355	12,472	13,870	14,923	15,485	16,433	17,566	18,847	20,137
6. Indicated shortage												
		217	80	4	64	47	2	-	-	-	-	-
7. Indicated demand within Canada (5 + 6)												
		8,530	10,633	11,359	12,536	13,917	14,925	15,485	16,433	17,566	18,847	20,137
INDICATED RESERVE:												
8. Difference (4 - 7)												
		+ 657	+1,093	+1,797	+1,450	+ 975	+1,394	+2,991	44,001	44,919	44,278	+3,756
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within Canada												
		49,635	63,437	67,331	73,754	80,679	85,753	87,080	93,841	100,971	109,060	116,545
10. Indicated shortage												
		378	3	11	378	1,546	580	93	-	-	-	-
11. Indicated firm energy requirement within Canada (9 + 10)												
		50,013	63,440	67,342	74,132	82,225	86,333	87,173	93,841	100,971	109,060	116,545
12. Deliveries of firm energy to:												
	(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
	(b) United States	1,418	1,378	1,357	1,332	1,226	1,172	1,264	1,225	1,223	947	845
(c) Total (a + b)												
		1,418	1,378	1,357	1,332	1,226	1,172	1,264	1,225	1,223	947	845
13. Firm energy requirement on Canada (11 + 12)												
		51,431	64,818	68,699	75,464	83,451	87,505	88,437	95,066	102,194	110,007	117,390

## FIFTH ANNUAL, ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

		1950	1953	1954	1955	1956	1957	1958	FORECAST			
									1959	1960	1961	1962
CAPABILITY:												
1. Net generating capability:												
	(a) Hydro	176	202	207	207	215	220	241	249	258	271	271
	(b) Thermal	12	15	16	16	27	29	28	45	45	45	46
2. Receipts of firm power from:												
	(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
	(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:												
	(a) Other provinces	-	-	-	-	6	6	8	8	14	14	14
	(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)												
		188	217	223	223	236	243	263	286	289	302	303
ACTUAL												
FIRM POWER PEAK LOAD:												
5. Within province												
		177	195	201	206	222	222	231	242	252	260	265
6. Indicated shortage												
		-	-	1	1	2	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)												
		177	195	202	207	224	222	231	242	252	260	265
INDICATED RESERVE:												
8. Difference (4 - 7)												
		+ 11	+ 22	+ 21	+ 16	+ 12	+ 21	+ 32	+ 44	+ 37	+ 42	+ 38
MILLIONS OF KILOWATT HOURS												
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within province												
		1,058	1,190	1,225	1,289	1,374	1,333	1,320	1,366	1,482	1,562	1,676
10. Indicated shortage												
		-	-	9	10	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)												
		1,058	1,190	1,234	1,299	1,374	1,333	1,320	1,366	1,482	1,562	1,676
12. Deliveries of firm energy to:												
	(a) Other provinces	-	-	-	-	31	46	44	56	88	101	101
	(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)												
		-	-	-	-	31	46	44	56	88	101	101
13. Firm energy requirement on the province (11 + 12)												
		1,058	1,190	1,234	1,299	1,405	1,379	1,364	1,422	1,570	1,663	1,777



TABLE I

## SUMMARY - PRINCE EDWARD ISLAND

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST		
								1959	1960	1961
<b>CAPABILITY:</b>										
1. Net generating capability:										
(a) Hydro	10	18	18	18	18	25	26	26	36	36
(b) Thermal	-	-	-	-	-	-	-	-	-	-
2. Receipts of firm power from:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	10	18	18	18	18	25	26	26	36	36
	ACTUAL							FORECAST		
<b>FIRM POWER PEAK LOAD:</b>										
5. Within province	8	10	11	12	12	14	16	18	21	22
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	8	10	11	12	12	14	16	18	21	22
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 2	+ 8	+ 7	+ 6	+ 6	+ 11	+ 10	+ 8	+ 15	+ 14
	MILLIONS OF KILOWATT HOURS									
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm energy requirement within province	31	41	46	51	53	60	69	76	86	96
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	31	41	46	51	53	60	69	76	86	96
12. Deliveries of firm energy to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	31	41	46	51	53	60	69	76	86	96

FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - NOVA SCOTIA

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST			
								1959	1960	1961	1962
	CAPABILITY:										
1. Net generating capability:											
(a) Hydro	113	124	130	136	136	126	127	127	142	148	159
(b) Thermal	96	176	188	248	242	289	284	366	366	366	366
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	2	2	2	2	2	2	3	3	3	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	207	298	316	382	376	413	408	490	505	514	525
	ACTUAL							FORECAST			
FIRM POWER PEAK LOAD:											
5. Within province	163	235	245	278	301	322	335	354	375	395	417
6. Indicated shortage	4	4	3	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	167	239	248	278	301	322	335	354	375	395	417
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 40	+ 59	+ 68	+104	+ 75	+ 91	+ 73	+136	+130	+119	+108
MILLIONS OF KILOWATT HOURS											
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	891	1,211	1,277	1,357	1,486	1,466	1,581	1,613	1,725	1,816	1,912
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	891	1,211	1,277	1,357	1,486	1,466	1,581	1,613	1,725	1,816	1,912
12. Deliveries of firm energy to:											
(a) Other provinces	6	7	7	8	8	8	10	11	12	13	14
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	6	7	7	8	8	8	10	11	12	13	14
13. Firm energy requirement on the province (11 + 12)	897	1,218	1,284	1,365	1,494	1,474	1,591	1,624	1,737	1,829	1,926

## SUMMARY - NEW BRUNSWICK

Thousands of kilowatts

		CAPABILITY:							FORECAST							
		1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962				
1. Net generating capability:																
	(a) Hydro	90	112	112	112	112	148	185	185	185	185	185	185	185	185	
	(b) Thermal	102	132	132	144	174	173	187	188	201	249	256	256	256	256	
2. Receipts of firm power from:																
	(a) Other provinces	2	2	2	4	5	5	8	9	9	7	7	7	7	7	
	(b) United States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3. Deliveries of firm power to:																
	(a) Other provinces	5	6	5	5	5	8	9	9	9	8	8	8	8	8	
	(b) United States	189	240	241	255	286	318	371	373	386	433	440	440	440	440	
4. Net capability (1 + 2 - 3)																
FIRM POWER PEAK LOAD:													FORECAST			
5. Within province													296	317	341	360
6. Indicated shortage													-	-	-	-
7. Indicated demand within province (5 + 6)													296	317	341	360
INDICATED RESERVE:																
8. Difference (4 - 7)													+ 77	+ 69	+ 92	+ 80
FIRM ENERGY REQUIREMENT:													MILLIONS OF KILOWATT HOURS			
9. Firm energy requirement within province													1,527	1,680	1,825	1,944
10. Indicated shortage													-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)													1,527	1,680	1,825	1,944
12. Deliveries of firm energy to:																
	(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	(b) United States	41	36	59	33	32	29	63	46	44	43	41	41	41	41	
	(c) Total (a + b)	41	36	59	33	32	29	63	46	44	43	41	41	41	41	
13. Firm energy requirement on the province (11 + 12)													1,573	1,724	1,868	1,985
Revised																

\* Revised.

FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - QUEBEC

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST		
								1959	1960	1961
<b>CAPABILITY:</b>										
1. Net generating capability:										
(a) Hydro	4,370	5,300	5,378	5,583	5,854	6,406	6,992	7,700	8,812	8,824
(b) Thermal	26	35	35	36	36	55	61	61	61	71
2. Receipts of firm power from:										
(a) Other provinces	1	1	1	1	7	7	9	9	16	16
(b) United States	-	-	4	5	4	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces*	732	737	719	729	691	694	673	703	704	707
(b) United States	56	56	56	56	56	56	57	57	57	57
4. Net capability (1 + 2 - 3)	3,609	4,543	4,643	4,840	5,154	5,718	6,332	7,010	8,128	8,145
	ACTUAL							FORECAST		
<b>FIRM POWER PEAK LOAD:</b>										
5. Within province	3,174	3,951	4,092	4,367	4,951	5,475	5,292	5,379	5,856	6,362
6. Indicated shortage	-	4	-	44	44	2	-	-	-	-
7. Indicated demand within province (5 + 6)	3,174	3,955	4,092	4,411	4,995	5,477	5,292	5,379	5,856	6,362
	INDICATED RESERVE:							+1,631		
8. Difference (4 - 7)	+ 435	+ 588	+ 551	+ 429	+ 159	+ 241	+1,040	+2,272	+1,785	+1,261
	MILLIONS OF KILOWATT HOURS									
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm energy requirement within province	20,442	26,711	27,954	29,479	31,088	31,845	31,491	32,767	36,148	40,086
10. Indicated shortage	123	1	1	362	1,546	540	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	20,565	26,712	27,955	29,841	32,634	32,385	31,491	32,767	36,148	40,086
12. Deliveries of firm energy to:										
(a) Other provinces*	4,425	4,434	4,331	4,260	4,117	4,075	3,971	3,979	3,987	3,989
(b) United States	490	490	490	490	491	485	490	490	490	490
(c) Total (a + b)	4,915	4,924	4,821	4,750	4,608	4,560	4,461	4,469	4,477	4,479
13. Firm energy requirement on the province (11 + 12)	25,480	31,636	32,776	34,591	37,242	36,945	35,952	37,236	40,625	44,565
	* Includes deliveries supplied from Cedars on a short term basis.							47,917		

TABLE I

## SUMMARY - ONTARIO

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST			
								1959	1960	1961	1962
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	2,367	2,684	3,481	3,688	3,778	4,145	5,081	5,381	5,350	5,267	5,318
(b) Thermal	199	809	607	800	787	787	800	1,181	1,561	1,960	2,245
2. Receipts of firm power from:											
(a) Other provinces*	741	746	732	741	702	658	668	697	698	700	702
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	1	1	1	1	1	1	1	1	2	2	2
(b) United States	85	85	85	85	86	86	86	86	86	41	41
4. Net capability (1 + 2 - 3)	3,221	4,153	4,734	5,143	5,180	5,503	6,462	7,172	7,521	7,884	8,222
ACTUAL											
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	3,078	3,969	4,261	4,757	5,064	5,369	5,794	6,279	6,565	6,961	7,354
6. Indicated shortage	213	60	-	18	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	3,291	4,029	4,261	4,775	5,064	5,369	5,794	6,279	6,565	6,961	7,354
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	- 70	+ 124	+ 473	+ 368	+ 116	+ 134	+ 668	+ 893	+ 956	+ 923	+ 868
MILLIONS OF KILOWATT HOURS											
9. Firm energy requirement within province	18,016	22,985	23,928	26,376	28,875	30,768	31,401	35,085	36,779	38,692	40,989
10. Indicated shortage	255	2	1	6	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	18,271	22,987	23,929	26,382	28,875	30,768	31,401	35,085	36,779	38,692	40,989
12. Deliveries of firm energy to:											
(a) Other provinces	2	3	3	3	4	4	5	5	5	5	5
(b) United States	703	668	624	687	703	658	711	689	689	414	314
(c) Total (a + b)	705	671	627	690	707	662	716	694	694	419	319
13. Firm energy requirement on the province (11 + 12)	18,976	23,658	24,556	27,072	29,582	31,430	32,117	35,779	37,473	39,111	41,308
* Includes deliveries received from Cedars on a short term basis.											



FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - MANITOBA

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST			
								1959	1960	1961	1962
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	418	487	522	547	556	561	566	566	566	566	566
(b) Thermal	10	23	46	46	46	78	168	168	294	294	294
2. Receipts of firm power from:											
(a) Other provinces	68	79	80	79	64	69	68	72	74	74	74
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	9	9	13	14	14	14	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	487	580	635	658	652	694	802	806	934	934	934
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	419	512	533	594	605	608	646	688	730	770	811
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	419	512	533	594	605	608	646	688	730	770	811
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 68	+ 68	+ 102	+ 64	+ 47	+ 86	+ 156	+ 118	+ 204	+ 164	+ 123
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	2,218	2,705	2,886	3,122	3,414	3,435	3,557	3,796	4,052	4,303	4,504
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	2,218	2,705	2,886	3,122	3,414	3,435	3,557	3,796	4,052	4,303	4,504
12. Deliveries of firm energy to:											
(a) Other provinces	79	79	114	114	94	136	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	79	79	114	114	94	136	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	2,297	2,784	3,000	3,236	3,508	3,571	3,557	3,796	4,052	4,303	4,504

TABLE I

## SUMMARY - SASKATCHEWAN

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST			
								1959	1960	1961	1962
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	85	85	85	82	82	87	87				
(b) Thermal	129	197	243	257	320	376	451	87	107	107	174
2. Receipts of firm power from:								584	670	670	670
(a) Other provinces	-	-	-	-	-	-	-				
(b) United States	-	-	-	-	-	-	-	2	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	68	79	80	79	64	72	68	72	74	74	74
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	146	203	248	260	338	391	471	601	703	703	770
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	128	169	196	227	278	299	353	405	450	500	555
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	128	169	196	227	278	299	353	405	450	500	555
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 18	+ 34	+ 52	+ 33	+ 60	+ 92	+ 118	+ 196	+ 253	+ 203	+ 215
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	405	629	742	877	1,047	1,276	1,422	1,623	1,814	2,025	2,225
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	405	629	742	877	1,047	1,276	1,422	1,623	1,814	2,025	2,225
12. Deliveries of firm energy to:											
(a) Other provinces	500	559	558	571	554	503	504	523	523	553	553
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	500	559	558	571	554	503	504	523	523	553	553
13. Firm energy requirement on the province (11 + 12)	905	1,188	1,300	1,448	1,601	1,779	1,926	2,146	2,337	2,578	2,778

FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - ALBERTA

Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958	FORECAST			
								1959	1960	1961	1962
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	83	162	202	220	220	238	238	238	318	318	318
(b) Thermal	108	187	194	238	338	350	496	530	602	614	800
2. Receipts of firm power from:											
(a) Other provinces	-	-	4	-	4	4	4	4	4	4	4
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	3	8	-	3	-	-	1	2	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	341	400	455	562	592	737	770	924	936	1,122
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	176	284	313	391	451	476	580	654	722	800	880
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	176	284	313	391	451	476	580	654	722	800	880
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 12	+ 57	+ 87	+ 64	+ 111	+ 116	+ 157	+ 116	+ 202	+ 136	+ 242
	MILLIONS OF KILOWATT HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	1,023	1,372	1,581	1,859	2,180	2,424	2,760	3,054	3,382	3,727	4,103
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	1,023	1,372	1,581	1,859	2,180	2,424	2,760	3,054	3,382	3,727	4,103
12. Deliveries of firm energy to:											
(a) Other provinces	14	6	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	14	6	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	1,037	1,378	1,581	1,859	2,180	2,424	2,760	3,054	3,382	3,727	4,103

SUMMARY - BRITISH COLUMBIA

Thousands of kilowatts

		1950	1953	1954	1955	1956	1957	1958	FORECAST			
									1959	1960	1961	1962
CAPABILITY:												
1. Net generating capability:												
	(a) Hydro	852	1,003	1,578	1,614	1,866	2,187	2,356	2,504	2,644	2,647	2,647
	(b) Thermal	96	128	130	133	153	163	212	359	377	545	705
2. Receipts of firm power from:												
	(a) Other provinces	3	8	-	3	-	-	-	-	-	-	-
	(b) United States	-	-	-	-	52	-	-	-	-	-	-
3. Deliveries of firm power to:												
	(a) Other provinces	-	-	4	-	4	4	4	4	4	4	4
	(b) United States	30	30	30	20	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)												
		921	1,109	1,674	1,730	2,067	2,346	2,564	2,859	3,017	3,188	3,348
ACTUAL												
FIRM POWER PEAK LOAD:												
5. Within province												
		799	1,010	1,275	1,386	1,724	1,861	1,935	2,083	2,240	2,396	2,546
6. Indicated shortage												
		-	12	-	-	1	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)												
		799	1,022	1,275	1,386	1,725	1,861	1,935	2,083	2,240	2,396	2,546
INDICATED RESERVE:												
8. Difference (4 - 7)												
		+ 122	+ 87	+ 399	+ 344	+ 342	+ 485	+ 629	+ 776	+ 777	+ 792	+ 802
MILLIONS OF KILOWATT HOURS												
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within province												
		4,523	5,466	6,414	8,011	9,802	11,642	11,904	12,757	13,638	14,732	15,445
10. Indicated shortage												
		-	-	-	-	-	40	93	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)												
		4,523	5,466	6,414	8,011	9,802	11,682	11,997	12,757	13,638	14,732	15,445
12. Deliveries of firm energy to:												
	(a) Other provinces	-	-	10	10	10	9	6	6	7	7	7
	(b) United States	184	184	184	122	-	-	-	-	-	-	-
	(c) Total (a + b)	184	184	194	132	10	9	6	6	7	7	7
13. Firm energy requirement on the province (11 + 12)												
		4,707	5,650	6,608	8,143	9,812	11,691	12,003	12,763	13,645	14,739	15,452





TABLE II

## NET GENERATING CAPABILITY WITHIN PROVINCES\*

Thousands of kilowatts

P R O V I N C E	1950	1953	1954	1955	1956	1957	1958	F O R E C A S T				P E R C E N T A G E C H A N G E	
								1959	1960	1961	1962	1954-1958	1958-1962
Newfoundland (including Labrador)	188	217	223	223	242	249	271	294	303	316	317	21.5	17.0 42.2
Prince Edward Island	10	18	18	18	18	25	26	26	36	36	36	44.4	38.5 100.0
Nova Scotia	209	300	318	384	378	415	411	493	508	514	525	29.2	27.7 65.1
New Brunswick	192	244	244	256	286	321	372	373	386	434	441	52.5	18.5 80.7 25.1
Quebec	4,396	5,335	5,413	5,619	5,890	6,461	7,053	7,761	8,873	8,895	8,895	30.3	26.1 64.3
Ontario	2,566	3,493	4,088	4,488	4,565	4,932	5,881	6,562	6,911	7,227	7,563	43.9	28.6 85.0
Manitoba	428	510	568	593	602	639	734	734	860	860	860	29.2	17.2 51.4
Saskatchewan	214	282	328	339	402	463	538	671	777	777	844	64.0	56.9 157.3
Alberta	191	349	396	458	558	588	734	768	920	932	1,118	85.4	52.3 182.3
British Columbia	948	1,131	1,708	1,747	2,019	2,350	2,568	2,863	3,021	3,192	3,352	50.4	30.5 96.3
Yukon and N.W.T.	21	24	24	22	23	26	40	41	42	48	48	66.7	20.0 100.0
CANADA	9,363	11,903	13,328	14,147	14,983	16,469	18,628	20,586	22,637	23,231	23,999	39.8	28.8 80.1

\* Hydro plus thermal (Table I, item 1 a + 1 b).

FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES\*

Thousands of kilowatts

P R O V I N C E	1950	1953	1954	1955	1956	1957	1958	F O R E C A S T				P E R C E N T A G E C H A N G E		
								1959	1960	1961	1962	1954-1958	1958-1962	
Newfoundland (including Labrador)	177	195	202	207	224	222	231	242	252	260	265	14.4	14.7	31.2
Prince Edward Island	8	10	11	12	12	14	16	18	21	22	24	45.5	50.0	118.2
Nova Scotia	167	239	248	278	301	322	335	354	375	395	417	35.1	24.5	68.1
New Brunswick	177	201	210	236	243	258	273	296	317	341	360	30.0	31.9	71.4
Quebec	3,174	3,955	4,092	4,411	4,995	5,477	5,292	5,379	5,856	6,362	6,884	29.3	30.1	68.2
Ontario	3,291	4,029	4,261	4,775	5,064	5,369	5,794	6,279	6,565	6,961	7,354	36.0	26.9	72.6
Manitoba	419	512	533	594	605	608	646	688	730	770	811	21.2	25.5	52.2
Saskatchewan	128	169	196	227	278	299	353	405	450	500	555	80.1	57.2	183.2
Alberta	176	284	313	391	451	476	580	654	722	800	880	85.3	51.7	181.2
British Columbia	799	1,022	1,275	1,386	1,725	1,861	1,935	2,083	2,240	2,396	2,546	51.8	31.6	99.7
Yukon and N.W.T.	14	17	18	19	19	19	30	35	38	40	41	66.7	36.7	127.8
CANADA	8,530	10,633	11,359	12,536	13,917	14,925	15,485	16,433	17,566	18,847	20,137	36.3	30.0	77.3

\* Indicated Firm Demand (Table I, item 7).

TABLE IV

## FIRM ENERGY REQUIREMENT WITHIN PROVINCES\*

Millions of Kilowatt Hours

P R O V I N C E	F O R E C A S T							P E R C E N T A G E C H A N G E						
	1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1954-1958	1958-1962	1954-1962
Newfoundland (including Labrador)	1,058	1,190	1,234	1,299	1,374	1,333	1,320	1,366	1,482	1,562	1,676	7.0	27.0	35.8
Prince Edward Island	31	41	46	51	53	60	69	76	86	96	107	50.0	55.1	132.6
Nova Scotia	891	1,211	1,277	1,357	1,486	1,466	1,581	1,613	1,725	1,816	1,912	23.8	20.9	49.7
New Brunswick	961	1,044	1,189	1,237	1,262	1,389	1,444	1,527	1,680	1,825	1,944	21.4	34.6	63.5
Quebec	20,565	26,712	27,955	29,841	32,634	32,385	31,491	32,767	36,148	40,086	43,436	12.6	37.9	55.4
Ontario	18,271	22,987	23,929	26,382	28,875	30,768	31,401	35,085	36,779	38,692	40,989	31.2	30.5	71.3
Manitoba	2,218	2,705	2,886	3,122	3,414	3,435	3,557	3,796	4,052	4,303	4,504	23.3	26.6	56.1
Saskatchewan	405	629	742	877	1,047	1,276	1,422	1,623	1,814	2,025	2,225	91.6	56.5	199.9
Alberta	1,023	1,372	1,581	1,859	2,180	2,424	2,760	3,054	3,382	3,727	4,103	74.6	48.7	159.5
British Columbia	4,523	5,466	6,414	8,011	9,802	11,682	11,997	12,757	13,638	14,732	15,445	87.0	28.7	140.8
Yukon and N.W.T.	67	83	89	96	98	115	131	177	185	196	204	47.2	55.7	129.2
CANADA	50,013	63,440	67,342	74,132	82,225	86,333	87,173	93,841	100,971	109,060	116,545	29.4	33.7	73.1

Table I, item 11.

\* Table I, item 11.

FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE\*

Thousands of Kilowatts

	1950							1953							1954							1955							1956							1957							1958							FORECAST				PERCENTAGE CHANGE			
Newfoundland (including Labrador)																																																									
1. Gross capability																																																									
2. Total firm demand on the province																																																									
3. Indicated reserve (1 - 2)																																																									
4. Indicated reserve expressed as a % of total firm demand																																																									
Prince Edward Island																																																									
1. Gross capability																																																									
2. Total firm demand on the province																																																									
3. Indicated reserve (1 - 2)																																																									
4. Indicated reserve expressed as a % of total firm demand																																																									
Nova Scotia																																																									
1. Gross capability																																																									
2. Total firm demand on the province																																																									
3. Indicated reserve (1 - 2)																																																									
4. Indicated reserve expressed as a % of total firm demand																																																									
New Brunswick																																																									
1. Gross capability																																																									
2. Total firm demand on the province																																																									
3. Indicated reserve (1 - 2)																																																									
4. Indicated reserve expressed as a % of total firm demand																																																									

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

**FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD**

**TABLE V**  
**INDICATED RESERVE\***  
**Thousands of Kilowatts**

	PERCENTAGE CHANGE							F O R E C A S T				PERCENTAGE CHANGE			
	1954-1958	1958-1962	1954-1962	1959	1960	1961	1962	1959	1960	1961	1962	1954-1958	1958-1962	1954-1962	
<b>Quebec</b>															
1. Gross capability															
2. Total firm demand on the province															
	4,397	5,336	5,418	5,625	5,901	6,468	7,062	7,770	8,889	8,911	8,911	30.3	26.2	64.5	
	3,962	4,748	4,867	5,196	5,742	6,227	6,022	6,139	6,617	7,126	7,650	23.7	27.0	57.2	
3. Indicated reserve (1 - 2)	435	588	551	429	159	241	1,040	1,631	2,272	1,785	1,261	xxx	xxx	xxx	
4. Indicated reserve expressed as a % of total firm demand	11.0	12.4	11.3	8.3	2.8	3.9	17.3	26.6	34.3	25.0	16.5	xxx	xxx	xxx	
<b>Ontario</b>															
1. Gross capability															
2. Total firm demand on the province															
	3,307	4,239	4,820	5,229	5,267	5,590	6,549	7,259	7,609	7,927	8,265	35.9	26.2	71.5	
	3,377	4,115	4,347	4,861	5,151	5,456	5,881	6,366	6,653	7,004	7,397	35.3	25.8	70.2	
3. Indicated reserve (1 - 2)	- 70	124	473	368	116	134	668	893	956	923	868	xxx	xxx	xxx	
4. Indicated reserve expressed as a % of total firm demand	-	3.1	11.1	7.7	2.3	2.5	11.4	14.0	14.4	13.2	11.7	xxx	xxx	xxx	
<b>Manitoba</b>															
1. Gross capability															
2. Total firm demand on the province															
	496	589	648	672	666	708	802	806	934	934	934	23.8	16.5	44.1	
	428	521	546	608	619	622	646	688	730	770	811	18.3	25.5	48.5	
3. Indicated reserve (1 - 2)	68	68	102	64	47	86	156	118	204	164	123	xxx	xxx	xxx	
4. Indicated reserve expressed as a % of total firm demand	15.9	13.1	18.7	10.5	7.6	13.8	24.1	17.2	27.9	21.3	15.2	xxx	xxx	xxx	
<b>Saskatchewan</b>															
1. Gross capability															
2. Total firm demand on the province															
	214	282	328	339	402	463	539	673	777	777	844	64.3	56.6	157.3	
	196	248	276	306	342	371	421	477	524	574	629	52.5	49.4	127.9	
3. Indicated reserve (1 - 2)	18	34	52	33	60	92	118	196	253	203	215	xxx	xxx	xxx	
4. Indicated reserve expressed as a % of total firm demand	20.0	16.8	21.3	12.0	17.5	24.8	28.0	41.1	48.3	35.4	34.2	xxx	xxx	xxx	

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).



FIFTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

	1950 1953 1954 1955 1956 1957 1958							FORECAST				PERCENTAGE CHANGE		
	1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1954-1958	1958-1962	1954-1962
<b>Alberta</b>														
1. Gross capability	191	349	400	458	562	592	738	772	924	936	1,122	84.5	52.0	180.5
2. Total firm demand on the province	179	292	313	394	451	476	581	656	722	800	880	85.6	51.5	181.2
3. Indicated reserve (1 - 2)	12	57	87	64	111	116	157	116	202	136	242	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.7	19.5	27.8	16.2	24.6	24.4	27.0	17.7	28.0	17.0	27.5	xxx	xxx	xxx
<b>British Columbia</b>														
1. Gross capability	951	1,139	1,708	1,750	2,071	2,350	2,568	2,863	3,021	3,192	3,352	50.4	30.5	96.3
2. Total firm demand on the province	829	1,052	1,309	1,406	1,729	1,865	1,939	2,087	2,244	2,400	2,550	48.1	31.5	94.8
3. Indicated reserve (1 - 2)	122	87	399	344	342	485	629	776	777	792	802	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	14.7	8.3	30.5	24.5	19.8	26.0	32.4	37.2	34.6	33.0	31.5	xxx	xxx	xxx
<b>Yukon and N.W.T.</b>														
1. Gross capability	21	24	24	22	23	26	40	41	42	48	48	66.7	20.0	100.0
2. Total firm demand on the province	14	17	18	19	19	19	30	35	38	40	41	66.7	36.7	127.8
3. Indicated reserve (1 - 2)	7	7	6	3	4	7	10	6	4	8	7	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	50.0	41.2	33.3	15.8	21.1	36.8	33.3	17.1	10.5	20.0	17.1	xxx	xxx	xxx
<b>CANADA</b>														
1. Gross capability	9,363	11,903	13,332	14,152	15,039	16,469	18,628	20,586	22,637	23,231	23,999	39.7	28.8	80.0
2. Total firm demand on Canada	8,706	10,810	11,535	12,702	14,064	15,075	15,637	16,585	17,718	18,953	20,243	35.6	29.5	75.5
3. Indicated reserve (1 - 2)	657	1,093	1,797	1,450	975	1,394	2,991	4,001	4,919	4,278	3,756	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	7.5	10.1	15.6	11.4	6.9	9.2	19.1	24.1	27.8	22.6	18.6	xxx	xxx	xxx

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

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The Policy Sub-Committee serves as an over-all co-ordinating agency for these surveys, the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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*Sixth*

**ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD**

**1959 Actual**

**1960 - 1963 Forecast**

**DOMINION BUREAU OF STATISTICS**

Public Finance and Transportation Division

Public Utilities Section



DOMINION BUREAU OF STATISTICS  
Public Finance and Transportation Division  
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*Sixth*  
ANNUAL ELECTRIC POWER SURVEY  
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TABLE OF CONTENTS

	<u>Page</u>
Introduction .....	1
Review of Survey Results .....	2
Definitions .....	4
 <u>CHARTS</u> 	
A: Net Generating Capability within Canada, 1950 through 1963 .....	6
B: Net Capability and Firm Demand within Canada, 1950 through 1963 .....	7
C: Net Generating Capability within Provinces, 1950 through 1963 .....	8
D: Net Capability and Firm Demand within Provinces, 1950 through 1963 ...	10
E: Firm Energy Requirement within Canada, 1950 through 1963 .....	12
 <u>TABLES</u> 	
I: Summary by Provinces and Canada, 1950, 1954 through 1963 .....	13
II: Net Generating Capability within Provinces, 1950, 1954 through 1963 ..	25
III: Firm Power Peak Load Within Provinces, 1950, 1954 through 1963 .....	26
IV: Firm Energy Requirement within Provinces, 1950, 1954 through 1963 ....	27
V: Indicated Reserve, 1950, 1954 through 1963 .....	28
Canadian Electrical Association Policy Sub-Committee .....	31
Surveys Sub-Committee .....	32





## Introduction

This report presents the results of the sixth annual Electric Power Survey of Capability and Load which was conducted in March 1960 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate 10,000,000 kilowatt hours or more per annum. The 1960 report is based on returns from 130 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 130 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1954 - 1963 inclusive, the latter four years on a forecast basis. Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load. This load is calculated in terms of contractual commitments for firm power.

Generating capability is the maximum output that can be maintained at the time of annual firm power peak load. Net generating capability refers to the amount left after power used in station service is deducted. It is calculated on the basis of actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed capacity, a term used in reference to the name plate ratings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table I) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less deliveries outside the province.

Statistics of the power situation within Canada and within the individual provinces provide a measure of the growth of the industry within geographic areas and indicate the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

### Review of Survey Results

Net generating capability: Net generating capability in Canada rose 8.5 per cent in 1959 to 20,205,000 kilowatts from the 1958 total of 18,628,000. The increase was just under the 9.0 per cent averaged over the nine-year period covered since the survey was inaugurated and compares with an increase of 13.0 per cent forecast for 1960. Greatly below-average increases of 2.1, 4.0 and 5.1 per cent are planned for 1961, 1962 and 1963 because of the substantial reserves which have been built up since 1956. In 1963, net generating capability at 25,487,000 kilowatts will have advanced some 26.1 per cent over the current level.

More than half of the increase planned for the next four years will be thermal compared with less than 20 per cent in the four-year period ended 1959. Thermal generating capability will account for 23.1 per cent of the total in 1963, against 15.4 per cent in 1959.

Since 1950, annual increments to thermal generating capability have averaged 17.1 per cent; additions between 1959 and 1963 are expected to average 17.7 per cent. Annual increases in hydro generating capability, which averaged 8.2 per cent between 1952 and 1959, are forecast as declining sharply to 3.5 per cent during the next four years.

Firm power peak load: Firm power peak load within Canada in 1959 amounted to 16,201,000 kilowatts, an increase of 4.1 per cent over the revised 1958 total of 15,568,000. The forecast for 1963 is 21,170,000 kilowatts, an estimated rise of 30.7 per cent. Annual rates of increase have averaged 7.4 per cent since 1950, slightly higher than the 6.9 per cent forecast for the next four years. The forecast rate of increase, however, is somewhat higher than the 6.6 per cent achieved in the last four years.

During the eight-year period 1955-1963 a growth in firm power peak load of 162.5 per cent is indicated in Saskatchewan and 155.7 per cent in Alberta. The increase for all Canada during this period is expected to approximate 69 per cent.

Indicated Reserve: The indicated reserve for Canada rose sharply in 1959 to 3,852,000 kilowatts from the revised total of 2,908,000 in 1958. By 1963 it will have risen to 4,211,000 kilowatts, but represent only 19.8 per cent of firm demand as compared with this year's 23.5 per cent. From a low of 8.5 per cent in 1956 the margin of reserve is expected to reach a peak of 29.2 per cent in 1960 before subsiding to the 1963 level of 19.8 per cent.

Reserves for individual provinces varied in 1959 from a high of 49.7 per cent in Saskatchewan to a low of 11.6 per cent in Ontario.

Firm Energy Requirement: Firm energy requirement rose 7.5 per cent in 1959 to 93,656,000,000 kilowatt hours from 87,102,000,000 in 1958. Further annual increases averaging 7.4 per cent over the next four years are expected to result in a firm energy requirement of 124,743,000,000 kilowatt hours by 1963. The comparative stability of the rate of growth in firm energy requirement is evidenced by the fact that annual increments during the period 1950-1959 averaged 7.2 per cent.

Firm energy requirement within provinces showed much wider variations. During the eight-year period 1955-1963, firm energy requirement will increase 173.1 per cent in Saskatchewan, 160.5 per cent in Alberta and 131.4 per cent in Prince Edward Island. The comparable rate of growth for all Canada is 68.3 per cent.

During the recent survey a number of errors in reporting were uncovered which resulted, in some instances, in figures being revised for earlier years. Firm power peak load and firm energy requirement have been revised downwards for the province of Quebec in 1956 and 1957 and increased slightly in 1958. The changes in firm power peak load also affected indicated reserve. Small reductions in firm energy requirement were made for each year back to 1950 in Nova Scotia figures.

Chart A - Net Generating Capability Within Canada (Page 6): This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.

Chart B - Net Capability and Firm Demand Within Canada (Page 7): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart C - Net Generating Capability Within Provinces (Pages 8 - 9): Chart C illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.

Chart D - Net Capability and Firm Demand Within Provinces (Pages 10 - 11): This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement Within Canada (Page 12): Chart E shows the growth in Canadian firm energy requirement during the period 1950 - 1962.

Table I - Summary (Pages 13 to 24): This table summarizes capability, firm power peak load, indicated reserve and firm energy requirement for Canada and for each of the provinces.

Table II - Net Generating Capability Within Provinces (Page 25): This table compares provincial rates of growth in net generating capability.

Table III - Firm Power Peak Load Within Provinces (Page 26): This table compares rates of growth of firm power peak load within provinces.

Table IV - Firm Energy Requirement Within Provinces (Page 27): This table compares rates of growth of firm energy requirement within provinces.

Table V - Indicated Reserve (Page 18): This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power deliveries outside the province. Gross capability consists of net generating capability (hydro and thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm demand is the indicated reserve, and this, expressed as a percentage of total firm demand, can be used as a measurement of the industry's ability to satisfy demand and meet contingencies. Since not all systems are fully interconnected it should be remembered that reserves of power cannot always be completely utilized.



## DEFINITIONS

### FIRM ENERGY REQUIREMENT

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

### FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

### FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT.

### FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

### INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

### INDICATED RESERVE

Net capability less indicated demand (+ or -).

### INDUSTRIAL ESTABLISHMENT

A firm which generates power primarily for use in own plants.

### NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.



NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

SYSTEM

Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

UTILITY

The Company, Commission, or UTILITY reporting or included in a SYSTEM report under Section IV (which generates at least part of its own power).

CHART-A

# NET GENERATING CAPABILITY WITHIN CANADA 1950-1963

THOUSANDS OF KILOWATTS  
26,000

THOUSANDS OF KILOWATTS  
26,000

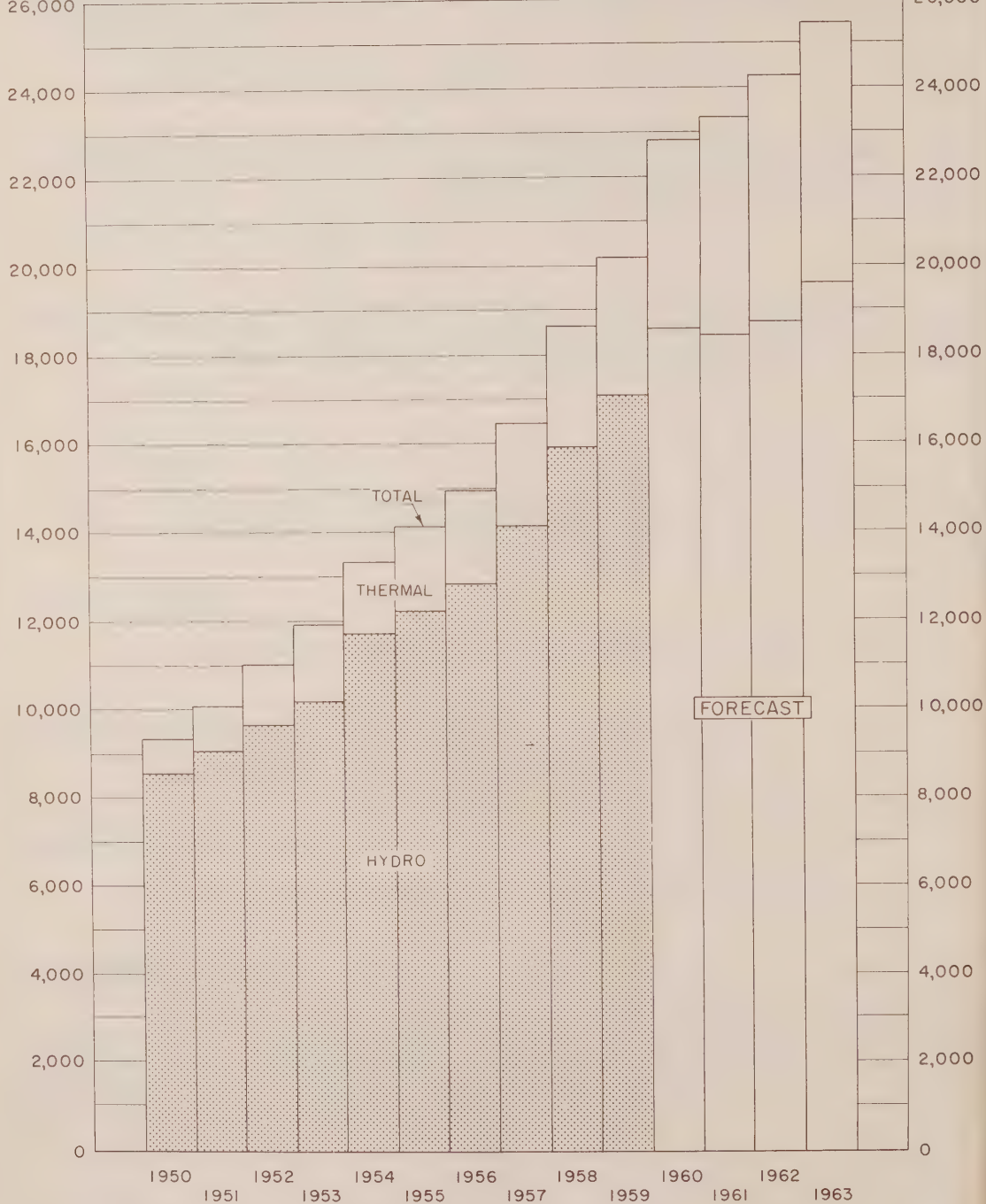


CHART-B

# NET CAPABILITY AND FIRM DEMAND WITHIN CANADA

1950 - 1963

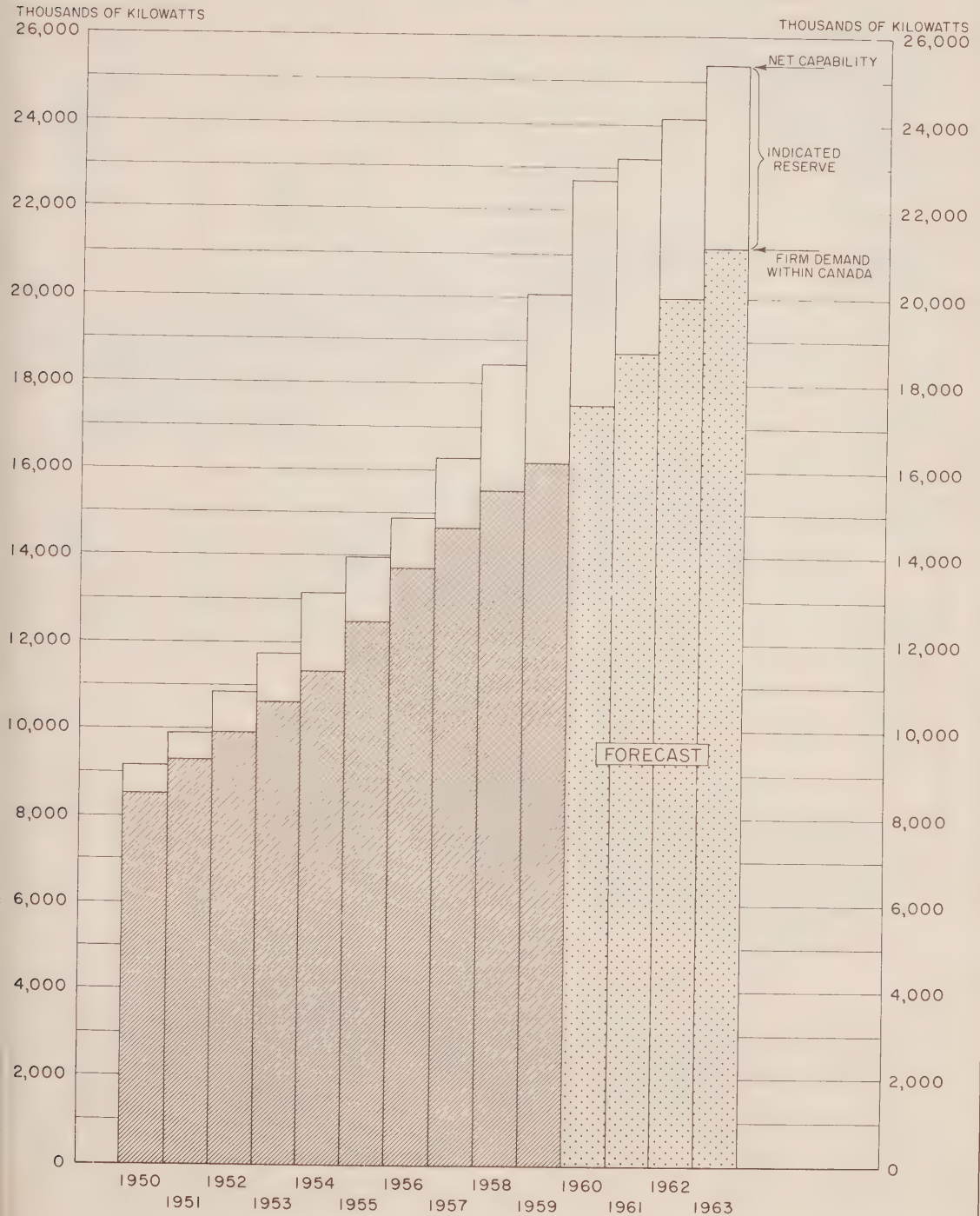
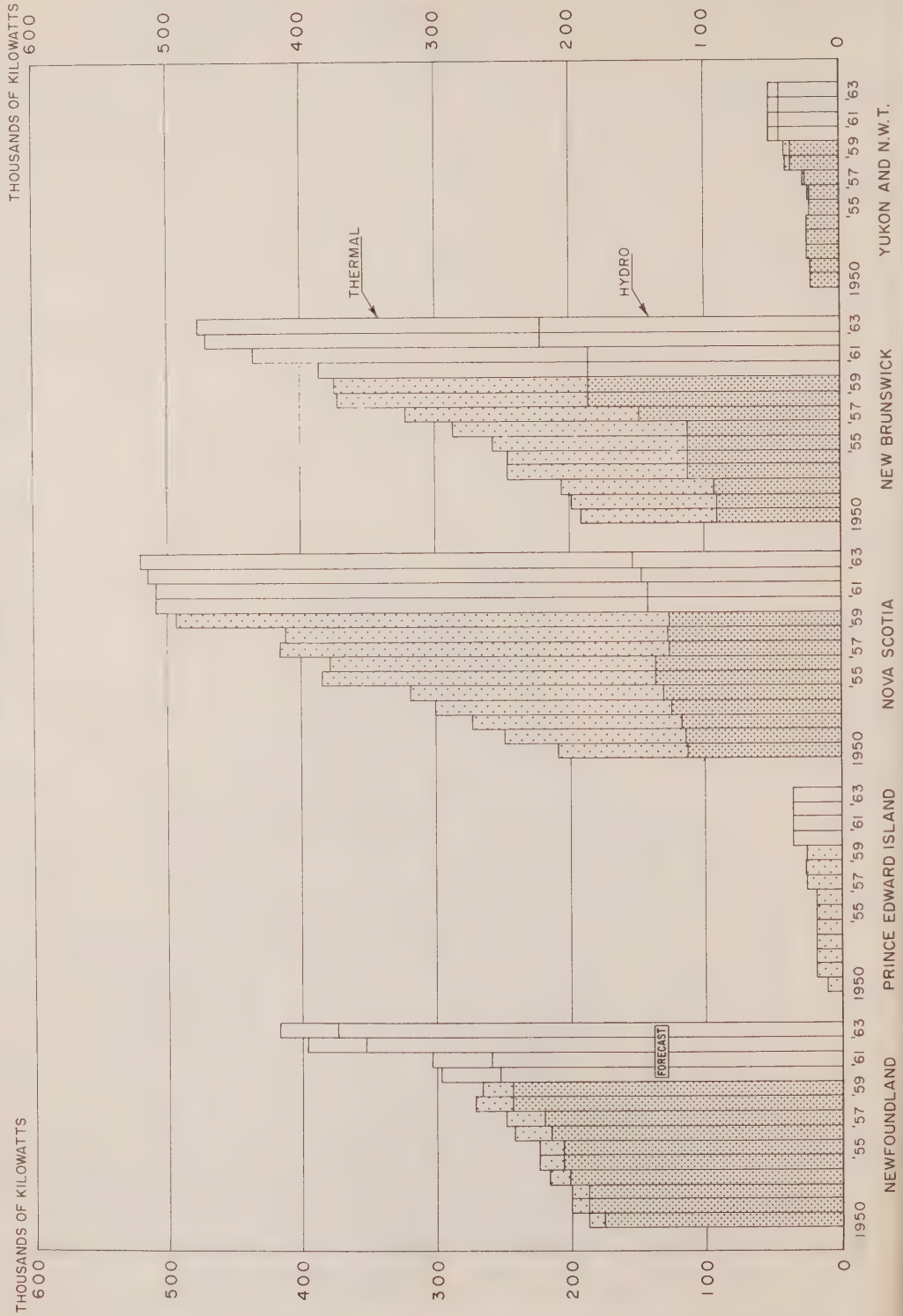


CHART - C

## NET GENERATING CAPABILITY WITHIN PROVINCES

1950-1963



# NET GENERATING CAPABILITY WITHIN PROVINCES

1950 - 1963

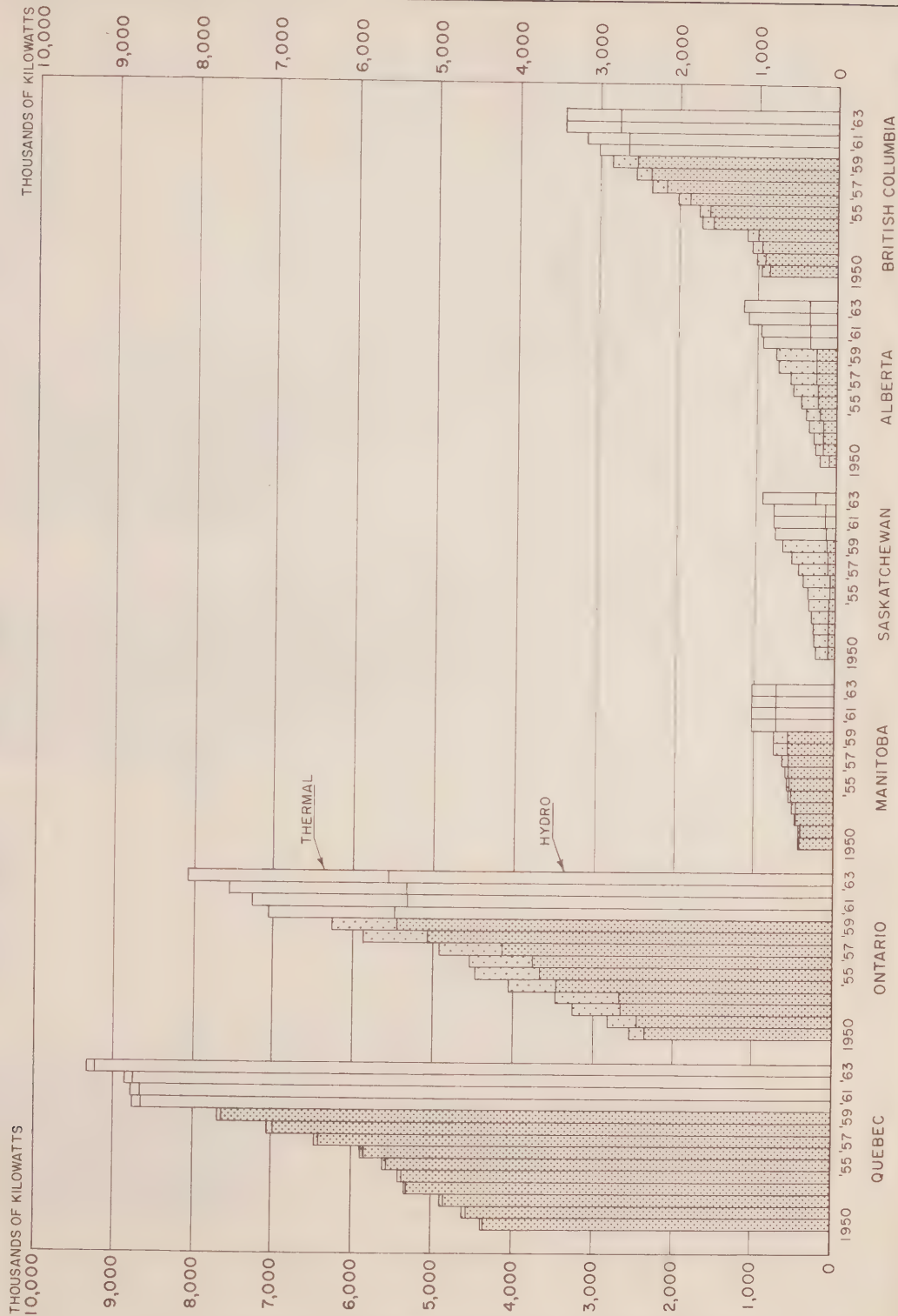
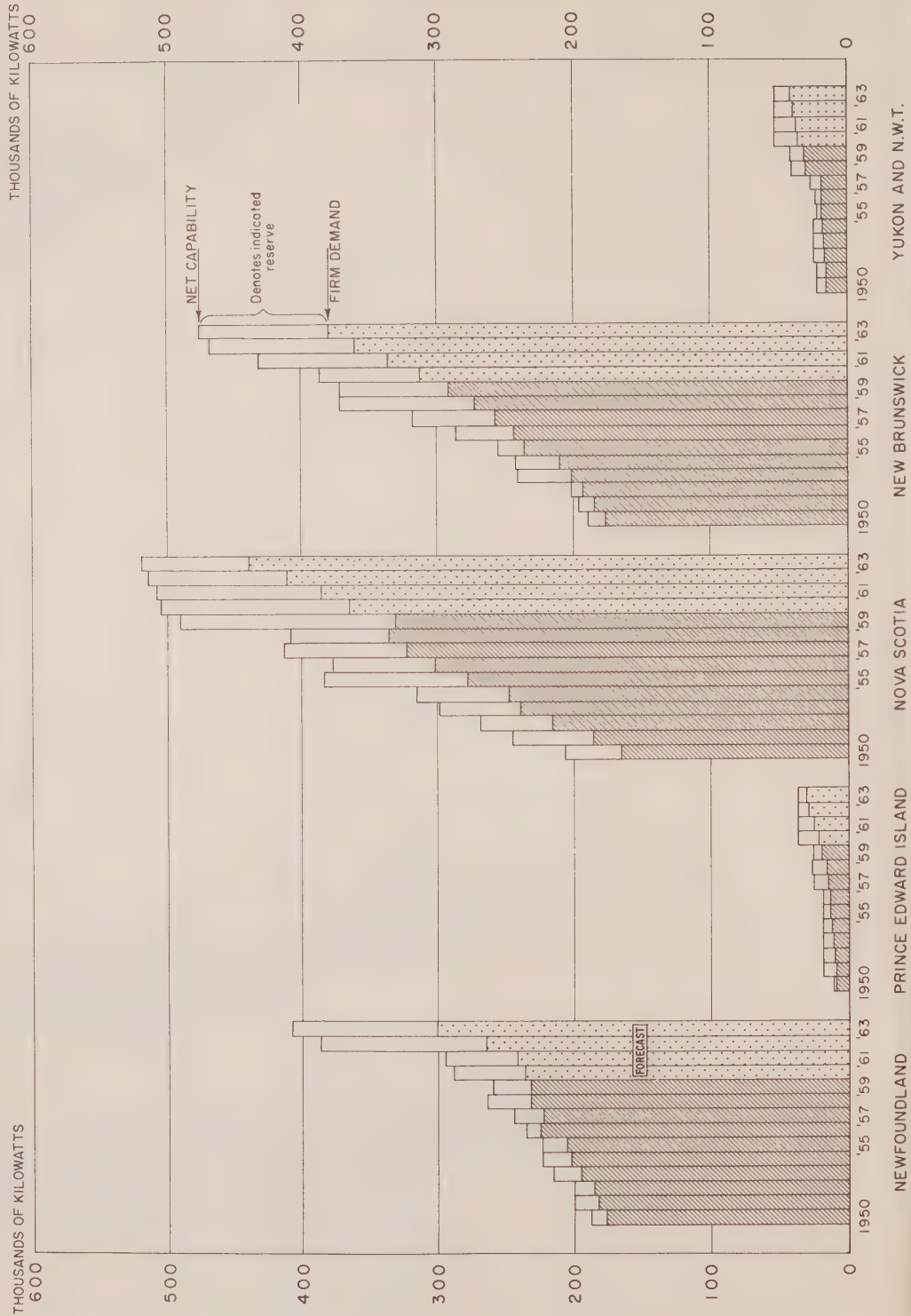




CHART-D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1950-1963



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1950 - 1963

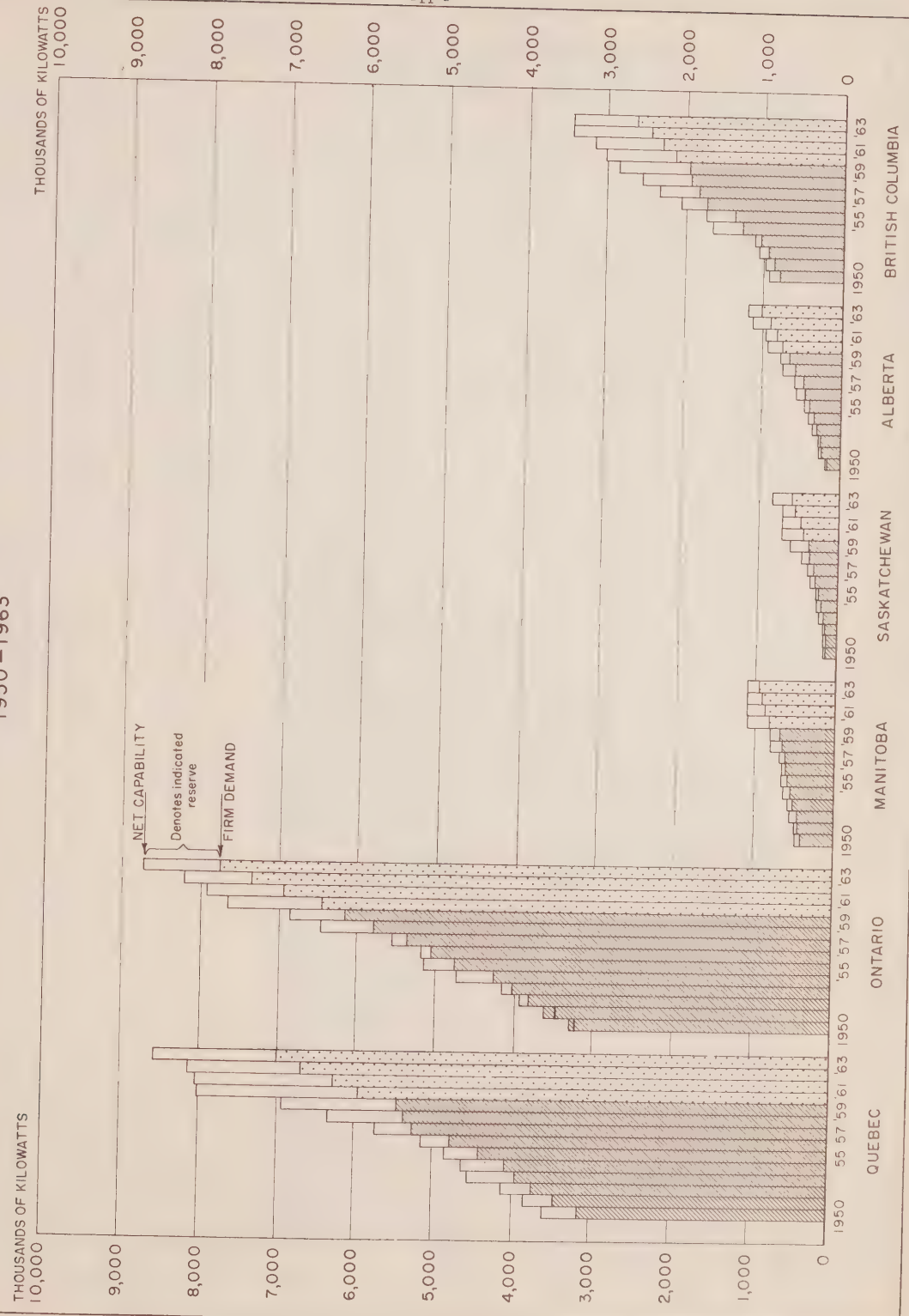


CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1950-1963

BILLIONS OF KILOWATTHOURS

BILLIONS OF KILOWATTHOURS

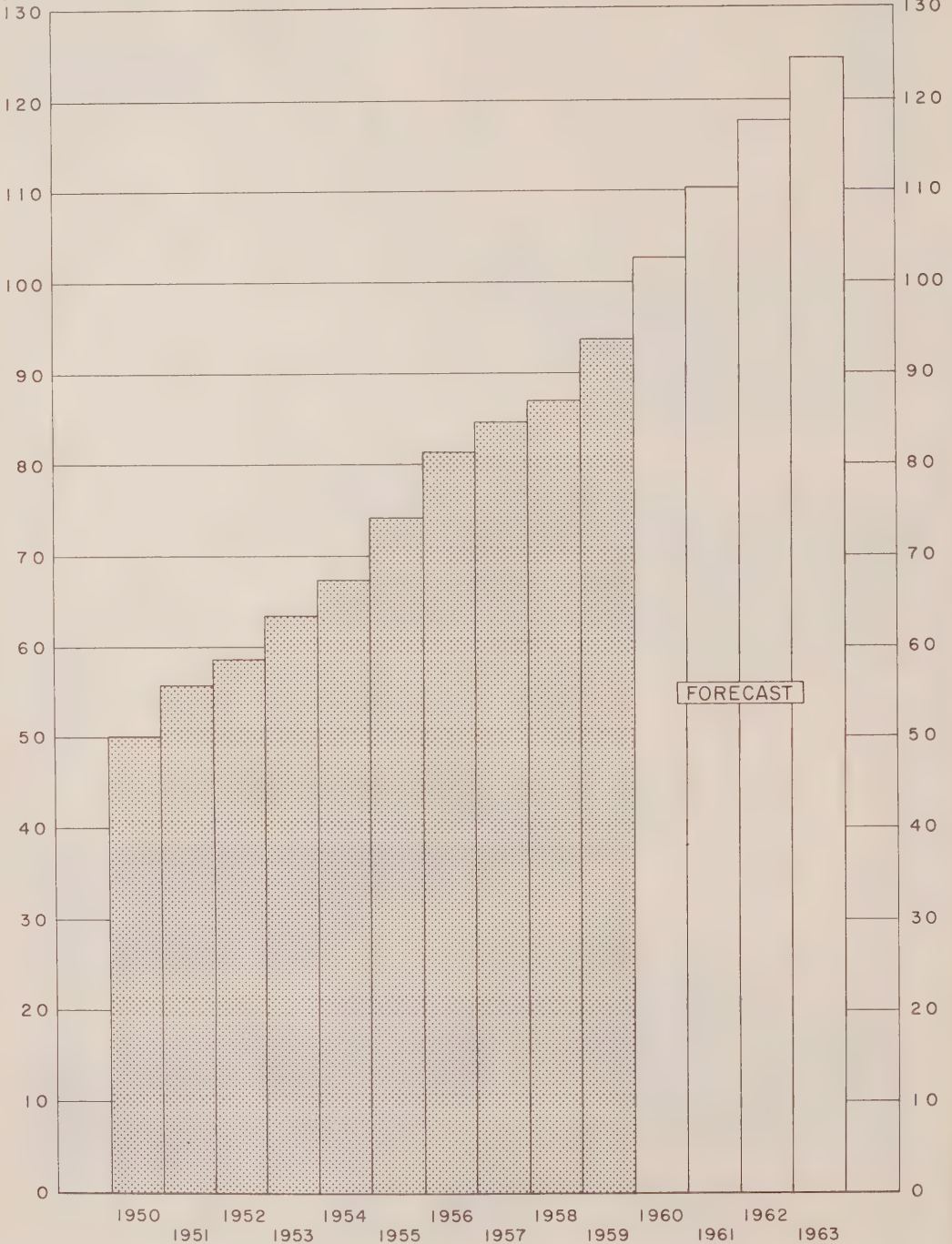


TABLE I

## SUMMARY - CANADA

Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959	F O R E C A S T			
								1960	1961	1962	1963
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	8,575	11,719	12,211	12,841	14,143	15,912	17,086	18,573	18,413	18,737	19,605
(b) Thermal	788	1,609	1,936	2,142	2,326	2,716	3,119	4,268	4,916	5,524	5,882
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	4	5	56	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	176	176	166	147	150	152	152	152	106	106	106
4. Net capability (1 + 2 - 3)	9,187	13,156	13,986	14,892	16,319	18,476	20,053	22,689	23,223	24,155	25,381
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Canada	8,313	11,355	12,472	13,668	14,664	15,568	16,201	17,529	18,710	19,999	21,170
6. Indicated shortage	217	4	64	47	2	-	-	-	-	-	-
7. Indicated demand within Canada (5 + 6)	8,530	11,359	12,536	13,715	14,666	15,568	16,201	17,529	18,710	19,999	21,170
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 657	+1,797	+1,450	+1,177	+1,653	+2,908	+3,852	+5,160	+4,513	+4,156	+4,211
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within Canada	49,627	67,317	73,748	79,913	84,222	87,102	93,656	102,794	110,287	117,869	124,743
10. Indicated shortage	378	11	378	1,546	554	-	-	-	-	-	-
11. Indicated firm energy requirement within Canada (9 + 10)	50,005	67,328	74,126	81,459	84,776	87,102	93,656	102,794	110,287	117,869	124,743
12. Deliveries of firm energy to:											
(a) Other provinces	1,418	1,357	1,332	1,226	1,172	1,264	1,253	1,251	946	844	843
(b) United States	1,418	1,357	1,332	1,226	1,172	1,264	1,253	1,251	946	844	843
(c) Total (a + b)	51,423	68,685	75,458	82,685	85,948	88,366	94,909	104,045	111,233	118,713	125,586
13. Firm energy requirement on Canada (11 + 12)											

SUMMARY - NEWFOUNDLAND (including Labrador)

Thousands of kilowatts

		CAPABILITY:										FORECAST			
		1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963			
1. Net generating capability:															
	(a) Hydro	176	207	207	215	220	243	243	252	259	352	373			
	(b) Thermal	12	16	16	27	29	28	24	45	44	44	44			
2. Receipts of firm power from:															
	(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-			
	(b) United States	-	-	-	-	-	-	-	-	-	-	-			
3. Deliveries of firm power to:															
	(a) Other provinces	-	-	-	6	6	8	7	8	9	9	9			
	(b) United States	-	-	-	-	-	-	-	-	-	-	-			
4. Net capability (1 + 2 - 3)		188	223	223	236	243	263	260	289	294	387	408			
		ACTUAL							FORECAST						
FIRM POWER PEAK LOAD:															
5. Within province		177	201	206	222	222	231	231	237	241	264	300			
6. Indicated shortage		-	1	1	2	-	-	-	-	-	-	-			
7. Indicated demand within province (5 + 6)		177	202	207	224	222	231	231	237	241	264	300			
INDICATED RESERVE:															
8. Difference (4 - 7)		+ 11	+ 21	+ 16	+ 12	+ 21	+ 32	+ 29	+ 52	+ 53	+ 123	+ 108			
FIRM ENERGY REQUIREMENT:															
9. Firm energy requirement within province		1,058	1,225	1,289	1,374	1,333	1,320	1,369	1,424	1,496	1,683	1,885			
10. Indicated shortage		-	9	10	-	-	-	-	-	-	-	-			
11. Indicated firm energy requirement within province (9 + 10)		1,058	1,234	1,299	1,374	1,333	1,320	1,369	1,424	1,496	1,683	1,885			
12. Deliveries of firm energy to:															
	(a) Other provinces	-	-	-	31	46	44	33	34	35	36	37			
	(b) United States	-	-	-	-	-	-	-	-	-	-	-			
	(c) Total (a + b)	-	-	-	31	46	44	33	34	35	36	37			
13. Firm energy requirement on the province (11 + 12)		1,058	1,234	1,299	1,405	1,379	1,364	1,402	1,458	1,531	1,719	1,922			



TABLE I

## SUMMARY - PRINCE EDWARD ISLAND

Thousands of kilowatts

CAPABILITY:	1950	1954	1955	1956	1957	1958	1959	FORECAST		
								1960	1961	1963
1. Net generating capability:										
(a) Hydro	-	-	-	-	-	-	-	-	-	-
(b) Thermal	10	18	18	18	25	26	25	37	37	37
2. Receipts of firm power from:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	10	18	18	18	25	26	25	37	37	37
FIRM POWER PEAK LOAD:										
5. Within province	8	11	12	12	14	16	19	21	24	30
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	8	11	12	12	14	16	19	21	24	30
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 2	+ 7	+ 6	+ 6	+ 11	+ 10	+ 6	+ 16	+ 13	+ 7
FIRM ENERGY REQUIREMENT:										
9. Firm energy requirement within province	31	46	51	53	60	69	81	85	96	118
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	31	46	51	53	60	69	81	85	96	118
12. Deliveries of firm energy to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	31	46	51	53	60	69	81	85	96	118



SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - NEW BRUNSWICK

Thousands of kilowatts

CAPABILITY:										
								FORECAST		
	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962
1. Net generating capability:										
(a) Hydro	90	112	112	112	148	185	185	185	185	221
(b) Thermal	102	132	144	174	173	187	188	201	249	249
2. Receipts of firm power from:										
(a) Other provinces	2	2	4	5	5	8	7	8	5	6
(b) United States	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	5	5	5	5	8	9	9	9	8	8
4. Net capability (1 + 2 - 3)										
	189	241	255	286	318	371	371	385	431	468
FIRM POWER PEAK LOAD:										
ACTUAL										
5. Within province	177	210	235	243	258	273	291	312	337	360
6. Indicated shortage	-	-	1	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)										
	177	210	236	243	258	273	291	312	337	360
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 12	+ 31	+ 19	+ 43	+ 60	+ 98	+ 80	+ 73	+ 94	+ 108
FIRM ENERGY REQUIREMENT:										
MILLIONS OF KILOWATT-HOURS										
9. Firm energy requirement within province	970	1,199	1,248	1,275	1,347	1,402	1,523	1,753	1,902	2,008
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)										
	970	1,199	1,248	1,275	1,347	1,402	1,523	1,753	1,902	2,008
12. Deliveries of firm energy to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	41	59	33	32	29	63	51	49	47	45
(c) Total (a + b)	41	59	33	32	29	63	51	49	47	45
13. Firm energy requirement on the province (11 + 12)										
	1,011	1,258	1,281	1,307	1,376	1,465	1,574	1,802	1,949	2,053
										2,158



## SUMMARY - ONTARIO

		1950	1954	1955	1956	1957	1958	1959	FORECAST			
									1960	1961	1962	1963
CAPABILITY:												
1. Net generating capability:												
	(a) Hydro	2,367	3,481	3,688	3,778	4,145	5,081	5,467	5,495	5,304	5,312	5,569
	(b) Thermal	199	607	800	787	787	800	808	1,515	1,958	2,241	2,523
2. Receipts of firm power from:												
	(a) Other provinces*	741	732	741	702	705	668	692	694	695	696	699
	(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:												
	(a) Other provinces	1	1	1	1	1	1	2	2	2	2	2
	(b) United States	85	85	85	86	86	86	86	86	41	41	41
4. Net capability (1 + 2 - 3)												
		3,221	4,734	5,143	5,180	5,550	6,462	6,879	7,666	7,914	8,206	8,746
FIRM POWER PEAK LOAD:												
5. Within province												
		3,078	4,261	4,757	5,064	5,369	5,794	6,154	6,470	6,920	7,375	7,775
6. Indicated shortage												
		213	-	18	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)												
		3,291	4,261	4,775	5,064	5,369	5,794	6,154	6,470	6,920	7,375	7,775
INDICATED RESERVE:												
8. Difference (4 - 7)												
		- 70	+ 473	+ 368	+ 116	+ 181	+ 668	+ 725	+ 1,196	+ 994	+ 831	+ 971
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within province												
		18,016	23,928	26,376	28,875	30,768	31,401	34,844	36,612	38,996	41,411	43,690
10. Indicated shortage												
		255	1	6	-	-	-	-	-	-	-	-
11. Indicated form energy requirement within province (9 + 10)												
		18,271	23,929	26,382	28,875	30,768	31,401	34,844	36,612	38,996	41,411	43,690
12. Deliveries of firm energy to:												
	(a) Other provinces	2	3	3	4	4	5	5	5	5	5	5
	(b) United States	703	624	687	703	658	711	710	712	409	309	309
(c) Total (a + b)												
		705	627	690	707	662	716	715	717	414	314	314
13. Firm energy requirement on the province (11 + 12)												
		18,976	24,556	27,072	29,582	31,430	32,117	35,559	37,329	39,410	41,725	44,004

\* Includes deliveries received from Cedars on a short term basis.



SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - MANITOBA  
Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959	FORECAST			
								1960	1961	1962	1963
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	418	522	547	556	561	566	566	723	723	723	723
(b) Thermal	10	46	46	46	78	168	168	294	294	294	294
2. Receipts of firm power from:											
(a) Other provinces	68	80	79	64	69	68	72	73	76	76	76
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	9	13	14	14	14	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	487	635	658	652	694	802	806	1,090	1,093	1,093	1,093
	ACTUAL							FORECAST			
<b>FIRM POWER PEAK LOAD:</b>											
5. Within province	419	533	594	605	608	646	690	814	884	924	969
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	419	533	594	605	608	646	690	814	884	924	969
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 68	+ 102	+ 64	+ 47	+ 86	+ 156	+ 116	+ 276	+ 209	+ 169	+ 124
	MILLIONS OF KILOWATT-HOURS										
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within province	2,218	2,886	3,122	3,414	3,435	3,557	3,828	4,224	5,067	5,268	5,569
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	2,218	2,886	3,122	3,414	3,435	3,557	3,828	4,224	5,067	5,268	5,569
12. Deliveries of firm energy to:											
(a) Other provinces	79	114	114	94	136	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	79	114	114	94	136	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	2,297	3,000	3,236	3,508	3,571	3,557	3,828	4,224	5,067	5,268	5,569

TABLE I

## SUMMARY - SASKATCHEWAN

Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959	F O R E C A S T			
								1960	1961	1962	1963
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	85	85	82	82	87	87	88	108	111	111	245
(b) Thermal	129	243	257	320	376	451	583	669	669	669	669
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	1	1	1	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	68	80	79	64	69	68	72	73	76	76	76
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	146	248	260	338	394	471	600	705	704	704	838
	A C T U A L							F O R E C A S T			
FIRM POWER PEAK LOAD:											
5. Within province	128	196	227	278	299	353	377	430	479	538	596
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	128	196	227	278	299	353	377	430	479	538	596
	M I L L I O N S O F K I L O W A T T - H O U R S										
8. Difference (4 - 7)	+ 18	+ 52	+ 33	+ 60	+ 95	+ 118	+ 223	+ 275	+ 225	+ 166	+ 242
INDICATED RESERVE:											
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	405	742	877	1,047	1,276	1,422	1,527	1,709	1,917	2,142	2,395
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	405	742	877	1,047	1,276	1,422	1,527	1,709	1,917	2,142	2,395
12. Deliveries of firm energy to:											
(a) Other provinces	500	558	571	554	503	504	517	520	530	530	530
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	500	558	571	554	503	504	517	520	530	530	530
13. Firm energy requirement on the province (11 + 12)	905	1,300	1,448	1,601	1,779	1,926	2,044	2,229	2,447	2,672	2,925

SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - ALBERTA  
Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959	FORECAST		
								1960	1961	1963
<b>CAPABILITY:</b>										
1. Net generating capability:										
(a) Hydro	83	202	220	220	238	238	238	318	318	319
(b) Thermal	108	194	238	338	350	496	530	604	645	869
2. Receipts of firm power from:										
(a) Other provinces	-	4	-	4	4	4	3	3	2	1
(b) United States	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces	3	-	3	-	-	1	1	1	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	400	455	562	592	737	770	924	965	1,188
	ACTUAL							FORECAST		
<b>FIRM POWER PEAK LOAD:</b>										
5. Within province	176	313	391	451	476	580	649	729	809	899
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	176	313	391	451	476	580	649	729	809	899
	MILLIONS OF KILOWATT-HOURS							+ 195 + 156 + 216 + 188		
<b>INDICATED RESERVE:</b>										
8. Difference (4 - 7)	+ 12	+ 87	+ 64	+ 111	+ 116	+ 157	+ 121			
<b>FIRM ENERGY REQUIREMENT:</b>										
9. Firm energy requirement within province	1,023	1,581	1,859	2,180	2,424	2,760	3,156	3,534	3,936	4,843
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	1,023	1,581	1,859	2,180	2,424	2,760	3,156	3,534	3,936	4,843
12. Deliveries of firm energy to:										
(a) Other provinces	14	-	-	-	-	-	5	2	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	14	-	-	-	-	-	5	2	-	-
13. Firm energy requirement on the province (11 + 12)	1,037	1,581	1,859	2,180	2,424	2,760	3,161	3,536	3,936	4,843

SUMMARY - BRITISH COLUMBIA

		1950	1954	1955	1956	1957	1958	1959	FORECAST			
									1960	1961	1962	1963
CAPABILITY:												
1. Net generating capability:												
	(a) Hydro	852	1,578	1,614	1,866	2,187	2,356	2,524	2,651	2,651	2,741	2,741
	(b) Thermal	96	130	133	153	163	212	353	372	539	707	702
2. Receipts of firm power from:												
	(a) Other provinces	3	-	3	-	-	-	-	-	-	-	-
	(b) United States	-	-	-	52	-	-	-	-	-	-	-
3. Deliveries of firm power to:												
	(a) Other provinces	-	4	-	4	4	4	3	3	2	1	-
	(b) United States	30	30	20	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)												
		921	1,674	1,730	2,067	2,346	2,564	2,874	3,020	3,188	3,447	3,443
FIRM POWER PEAK LOAD:												
5. Within province												
		799	1,275	1,386	1,724	1,821	1,935	1,963	2,158	2,309	2,470	2,640
6. Indicated shortage												
		-	-	-	1	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)												
		799	1,275	1,386	1,725	1,821	1,935	1,963	2,158	2,309	2,470	2,640
INDICATED RESERVE:												
8. Difference (4 - 7)												
		+ 122	+ 399	+ 344	+ 342	+ 525	+ 629	+ 911	+ 862	+ 879	+ 977	+ 803
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within province												
		4,523	6,414	8,011	9,802	11,445	11,726	12,234	13,290	14,263	15,092	16,041
10. Indicated shortage												
		-	-	-	-	14	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)												
		4,523	6,414	8,011	9,802	11,459	11,726	12,234	13,290	14,263	15,092	16,041
12. Deliveries of firm energy to:												
	(a) Other provinces	-	10	10	10	9	6	6	5	5	4	3
	(b) United States	184	184	122	-	-	-	-	-	-	-	-
(c) Total (a + b)												
		184	194	132	10	9	6	6	5	5	4	3
13. Firm energy requirement on the province (11 + 12)												
		4,707	6,608	8,143	9,812	11,468	11,732	12,240	13,295	14,268	15,096	16,044

SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I  
SUMMARY - YUKON AND NORTHWEST TERRITORIES

Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959	FORECAST		
								1960	1961	1962
1. Net generating capability:										
(a) Hydro	21	24	22	22	25	37	37	44	44	44
(b) Thermal	-	-	-	1	1	3	4	9	9	9
2. Receipts of firm power from:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	21	24	22	23	26	40	41	53	53	53
ACTUAL										
FORECAST										
FIRM POWER PEAK LOAD:										
5. Within province	14	18	19	19	19	30	31	35	37	39
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within province (5 + 6)	14	18	19	19	19	30	31	35	37	39
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 7	+ 6	+ 3	+ 4	+ 7	+ 10	+ 10	+ 18	+ 16	+ 14
MILLIONS OF KILOWATT-HOURS										
FIRM ENERGY REQUIREMENT:										
9. Firm energy requirement within province	67	89	96	98	115	131	157	181	186	194
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within province (9 + 10)	67	89	96	98	115	131	157	181	186	194
12. Deliveries of firm energy to:										
(a) Other provinces	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on the province (11 + 12)	67	89	96	98	115	131	157	181	186	194



TABLE II

## NET GENERATING CAPABILITY WITHIN PROVINCES\*

Thousands of kilowatts

P R O V I N C E	1950	1954	1955	1956	1957	1958	1959	F O R E C A S T				P E R C E N T A G E C H A N G E		
								1960	1961	1962	1963	1955- 1959	1959- 1963	1955- 1963
Newfoundland (including Labrador)	188	223	223	242	249	271	267	297	303	396	417	19.7	56.2	87.0
Prince Edward Island	10	18	18	18	25	26	25	37	37	37	37	38.9	48.0	105.5
Nova Scotia	209	318	384	378	415	411	493	508	508	514	520	28.4	5.5	35.4
New Brunswick	192	244	256	286	321	372	373	386	434	470	477	45.7	27.9	86.3
Quebec	4,396	5,413	5,619	5,890	6,461	7,053	7,681	8,761	8,782	8,879	9,329	36.7	21.4	66.0
Ontario	2,566	4,088	4,488	4,565	4,932	5,881	6,275	7,060	7,262	7,553	8,092	39.8	28.9	80.3
Manitoba	428	568	593	602	639	734	734	1,017	1,017	1,017	1,017	23.8	38.5	70.9
Saskatchewan	214	328	339	402	463	538	671	777	780	780	914	68.4	36.2	169.6
Alberta	191	396	458	558	588	734	768	922	963	1,114	1,188	67.7	54.7	159.4
British Columbia	948	1,708	1,747	2,019	2,350	2,568	2,877	3,023	3,190	3,448	3,443	64.7	19.7	97.1
Yukon and N.W.T.	21	24	22	23	26	40	41	53	53	53	53	86.4	29.3	140.9
CANADA	9,363	13,328	14,147	14,983	16,469	18,628	20,205	22,841	23,329	24,261	25,487	42.8	26.1	80.1

\* Hydro plus thermal (Table I, item 1 a + .).

## SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE III

## FIRM POWER PEAK LOAD WITHIN PROVINCES\*

Thousands of kilowatts

P R O V I N C E	1950	1954	1955	1956	1957	1958	1959	F O R E C A S T				P E R C E N T A G E C H A N G E		
								1960	1961	1962	1963	1955- 1959	1959- 1963	1955- 1963
Newfoundland (including Labrador)	177	202	207	224	222	231	231	237	241	264	300	11.6	29.9	44.9
Prince Edward Island	8	11	12	12	14	16	19	21	24	28	30	58.3	57.9	150.0
Nova Scotia	167	248	278	301	322	335	330	364	386	411	439	18.7	33.0	57.9
New Brunswick	177	210	236	243	258	273	291	312	337	360	380	23.3	30.6	61.0
Quebec	3,174	4,092	4,411	4,793	5,258	5,375	5,466	5,959	6,284	6,691	7,000	23.9	28.1	58.7
Ontario	3,291	4,261	4,775	5,064	5,369	5,794	6,154	6,470	6,920	7,375	7,775	28.9	26.3	62.8
Manitoba	419	533	594	605	608	646	690	814	884	924	969	16.2	40.4	63.1
Saskatchewan	128	196	227	278	299	353	377	430	479	538	596	66.1	58.1	162.5
Alberta	176	313	391	451	476	580	649	729	809	899	1,000	66.0	54.1	155.7
British Columbia	799	1,275	1,386	1,725	1,821	1,935	1,963	2,158	2,309	2,470	2,640	41.6	34.5	90.5
Yukon and N.W.T.	14	18	19	19	19	30	31	35	37	39	41	63.1	32.2	115.8
CANADA	8,530	11,359	12,536	13,715	14,666	15,568	16,201	17,529	18,710	19,999	21,170	29.2	30.7	68.9

\* Indicated Firm Demand (Table I, item 7).

TABLE IV

## FIRM ENERGY REQUIREMENT WITHIN PROVINCES\*

Millions of Kilowatt Hours

P R O V I N C E	1950	1954	1955	1956	1957	1958	1959	F O R E C A S T				P E R C E N T A G E C H A N G E	
								1960	1961	1962	1963	1955- 1959	1959- 1963
Newfoundland (including Labrador)	1,058	1,234	1,299	1,374	1,333	1,320	1,369	1,424	1,496	1,683	1,885	5.4	37.7
Prince Edward Island	31	46	51	53	60	69	81	85	96	108	118	58.8	45.7
Nova Scotia	874	1,253	1,340	1,464	1,447	1,551	1,634	1,722	1,822	1,929	2,046	21.9	25.2
New Brunswick	970	1,199	1,248	1,275	1,347	1,402	1,523	1,753	1,902	2,008	2,115	22.0	38.9
Quebec	20,565	27,955	29,841	31,877	31,112	31,763	33,303	38,260	40,606	43,659	45,841	11.6	37.6
Ontario	18,271	23,929	26,382	28,875	30,768	31,401	34,844	36,612	38,996	41,411	43,690	32.1	25.4
Manitoba	2,218	2,886	3,122	3,414	3,435	3,557	3,828	4,224	5,067	5,268	5,569	22.6	45.5
Saskatchewan	405	742	877	1,047	1,276	1,422	1,527	1,709	1,917	2,142	2,395	74.1	56.8
Alberta	1,023	1,581	1,859	2,180	2,424	2,760	3,156	3,534	3,936	4,375	4,843	69.8	53.4
British Columbia	4,523	6,414	8,011	9,802	11,459	11,726	12,234	13,290	14,263	15,092	16,041	52.7	31.1
Yukon and N.W.T.	67	89	96	98	115	131	157	181	186	194	200	63.5	27.4
CANADA	50,005	67,328	74,126	81,459	84,776	87,102	93,656	102,794	110,287	117,869	124,743	26.3	33.2

\* Table I, item 11.

SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE\*

Thousands of Kilowatts

P R O V I N C E	F O R E C A S T										P E R C E N T A G E C H A N G E		
	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1955- 1959	1959- 1963
<u>Newfoundland</u> (including Labrador)													
1. Gross capability	188	223	223	242	249	271	267	297	303	396	417	19.7	56.2
2. Total firm demand on the province	177	202	207	230	228	239	238	245	250	273	309	15.0	29.8
													49.3
3. Indicated reserve (1 - 2)	11	21	16	12	21	32	29	52	53	123	108	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.2	10.4	7.7	5.2	9.2	13.4	12.2	21.2	21.2	45.0	34.9	xxx	xxx
<u>Prince Edward Island</u>													
1. Gross capability	10	18	18	18	25	26	25	37	37	37	37	38.9	48.0
2. Total firm demand on the province	8	11	12	12	14	16	19	21	24	28	30	58.3	57.9
													150.0
3. Indicated reserve (1 - 2)	2	7	6	6	11	10	6	16	13	9	7	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	25.0	63.6	50.0	50.0	78.6	62.5	31.6	76.2	54.2	32.1	23.3	xxx	xxx
<u>Nova Scotia</u>													
1. Gross capability	209	318	384	378	415	411	493	508	508	514	520	28.4	5.5
2. Total firm demand on the province	169	250	280	303	324	338	333	367	386	411	439	18.9	31.8
													56.8
3. Indicated reserve (1 - 2)	40	68	104	75	91	73	160	141	122	103	81	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	23.7	27.2	37.1	24.8	28.1	21.6	48.0	38.4	31.6	25.1	18.4	xxx	xxx
<u>New Brunswick</u>													
1. Gross capability	194	246	260	291	326	380	380	394	439	476	483	46.1	27.1
2. Total firm demand on the province	182	215	241	248	266	282	300	321	345	368	388	24.5	29.3
													61.0
3. Indicated reserve (1 - 2)	12	31	19	43	60	98	80	73	94	108	95	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.6	14.4	7.9	17.3	22.6	34.8	26.7	22.7	27.2	29.3	24.5	xxx	xxx

\* Gross capability (Table I, item 1 + 2) less total firm demand on the provinces (Table I, item 7 + 3).

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

P R O V I N C E	1950							1954							1955							1956							1957							1958							1959							F O R E C A S T				P E R C E N T A G E C H A N G E																			
	1950							1954							1955							1956							1957							1958							1959							1960				1961				1962				1963				1955-1959				1959-1963			
	1950							1954							1955							1956							1957							1958							1959							1960				1961				1962				1963				1955-1959				1959-1963			
<u>Quebec</u>																																																																									
1. Gross capability																																																																									
2. Total firm demand on the province																																																																									
3. Indicated reserve (1 - 2)																																																																									
4. Indicated reserve expressed as a % of total firm demand																																																																									
<u>Ontario</u>																																																																									
1. Gross capability																																																																									
2. Total firm demand on the province																																																																									
3. Indicated reserve (1 - 2)																																																																									
4. Indicated reserve expressed as a % of total firm demand																																																																									
<u>Manitoba</u>																																																																									
1. Gross capability																																																																									
2. Total firm demand on the province																																																																									
3. Indicated reserve (1 - 2)																																																																									
4. Indicated reserve expressed as a % of total firm demand																																																																									
<u>Saskatchewan</u>																																																																									
1. Gross capability																																																																									
2. Total firm demand on the province																																																																									
3. Indicated reserve (1 - 2)																																																																									
4. Indicated reserve expressed as a % of total firm demand																																																																									

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).



SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V  
INDICATED RESERVE\*  
Thousands of Kilowatts

P R O V I N C E	1950							1954							1955							1956							1957							1958							1959							F O R E C A S T				P E R C E N T A G E C H A N G E										
Alberta																																																																
	1. Gross capability							191							400							458							562							592							738							771														
	2. Total firm demand on the province							179							313							394							451							476							581							650														
	3. Indicated reserve (1 - 2)							12							87							64							111							116							157							121														
	4. Indicated reserve expressed as a % of total firm demand							6.7							27.8							16.2							24.6							24.4							27.0							18.6														
British Columbia																																																																
	1. Gross capability							951							1,708							1,750							2,071							2,350							2,568							2,877														
	2. Total firm demand on the province							829							1,309							1,406							1,729							1,825							1,939							1,966														
	3. Indicated reserve (1 - 2)							122							399							344							342							525							629							911														
	4. Indicated reserve expressed as a % of total firm demand							14.7							30.5							24.5							19.8							28.8							32.4							46.3														
Yukon and N.W.T.																																																																
	1. Gross capability							21							24							22							23							26							40							41														
	2. Total firm demand on the province							14							18							19							19							30							31																					
	3. Indicated reserve (1 - 2)							7							6							3							4							7							10							10														
	4. Indicated reserve expressed as a % of total firm demand							50.0							33.3							15.8							21.1							36.8							33.3							32.2														
CANADA																																																																
	1. Gross capability							9,363							13,332							14,152							15,039							16,469							18,628							20,205														
	2. Total firm demand on Canada							8,706							11,535							12,702							13,862							14,816							15,720							16,353														
	3. Indicated reserve (1 - 2)							657							1,797							1,450							1,177							1,653							2,908							3,852														
	4. Indicated reserve expressed as a % of total firm demand							7.5							15.6							11.4							8.5							11.2							18.5							23.5														

\* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

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The Policy Sub-Committee serves as an over-all co-ordinating agency for these surveys, the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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*Seventh*  
ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

1960 Actual

1961 - 1964 Forecast



DOMINION BUREAU OF STATISTICS

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Public Utilities Section



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## TABLE OF CONTENTS

	<u>Page</u>
Introduction .....	5
Review of Survey Results .....	6
Definitions .....	8

### CHARTS

A: Net Generating Capability within Canada, 1950 through 1964 .....	10
B: Net Capability and Firm Demand within Canada, 1950 through 1964 .....	11
C: Net Generating Capability within Provinces, 1950 through 1964 .....	12
D: Net Capability and Firm Demand within Provinces, 1950 through 1964 ....	14
E: Firm Energy Requirement within Canada, 1950 through 1964 .....	16

### TABLES

1. Summary by Provinces and Canada, 1950, 1955 through 1964 .....	17
2. Net Generating Capability within Provinces, 1950, 1955 through 1964 ...	29
3. Firm Power Peak Load within Provinces, 1950, 1955 through 1964 .....	30
4. Indicated Firm Energy Requirement within Provinces, 1950, 1955 through 1964 .....	31
5. Indicated Reserve, 1950, 1955 through 1964 .....	32
Canadian Electrical Association Policy Sub-Committee .....	35
Surveys Sub-Committee .....	36





## Introduction

This report presents the results of the seventh annual Electric Power Survey of Capability and Load which was conducted in March 1961 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate 10,000,000 kilowatt hours or more per annum. The 1961 report is based on returns from 145 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 145 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1955 - 1964 inclusive, the latter four years on a forecast basis. Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load.

Net generating capability is the output that can be maintained at the time of annual firm power peak load after power used in station service is deducted. It is calculated on the basis of actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed capacity, a term used in reference to the name plate ratings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table 1) and the demand on the province (Table 3). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less deliveries outside the province.

Statistics of the power situation within Canada and within the individual provinces provide a measure of the growth of the industry within geographic areas and indicate the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

### Review of Survey Results

Net generating capability: Net generating capability in Canada rose 10.6 per cent in 1960 to 22,340,000 kilowatts from the 1959 total of 20,205,000. The increase was just under the 9.2 per cent annual growth rate over the ten-year period covered since the survey was inaugurated and compares with an increase of 13.1 per cent forecast for 1960. Greatly below-average increases of 3.7, 4.7, 5.6 and 3.9 per cent are planned for 1961, 1962, 1963 and 1964 because of the substantial reserves which have been built up since 1956. In 1964, net generating capability at 26,530,000 kilowatts will have advanced some 18.8 per cent over the current level.

The generating capability increase planned for the next four years will be 65 per cent thermal compared with less than 20 per cent in the four-year period ended 1959. Thermal generating capability will account for 24.6 per cent of the total in 1964, against 17.2 per cent in 1960.

Since 1950, thermal generating capability has had an annual growth rate of 17.1 per cent; additions between 1960 and 1964 are expected to average 14.4 per cent. The Annual rate of increase in hydro generating capability, which has been 8.0 per cent, between 1950 and 1960, is forecast to decline sharply to 2.8 per cent during the next four years.

Firm power peak load: Firm power peak load within Canada in 1960 amounted to 17,264,000 kilowatts, an increase of 6.6 per cent over the 1959 total of 16,201,000. The forecast for 1964 is 21,989,000 kilowatts, an estimated rise of 27.4 per cent. Annual rates of increase have averaged 7.4 per cent since 1950, slightly higher than the 6.9 per cent forecast for the next four years. The forecast rate of increase, however, is somewhat higher than the 6.3 per cent achieved in the last four years.

During the eight-year period 1956-1964, a growth in firm power peak load of 183.3 per cent is indicated in Prince Edward Island, and 131.5 per cent in Alberta and 123.4 per cent in Saskatchewan. The increase for all Canada during this period is expected to approximate 61 per cent.

Indicated Reserve: The indicated reserve for Canada rose sharply in 1960 to 4,910,000 kilowatts from the revised total of 3,852,000 in 1959. By 1964 it will decrease slightly to 4,419,000 kilowatts, and represent only 20.0 per cent of firm demand as compared with this year's 28.2 per cent. From a low of 7.8 per cent in 1956 the margin of reserve reached a peak of 28.2 per cent in 1960 and will slowly subside to the 1964 level of 20.0 per cent.

Reserves for individual provinces varied in 1960 from a high of 49.4 per cent in Saskatchewan to a low of 13.2 per cent in Manitoba.

Firm Energy Requirement: Firm energy requirement rose 8.9 per cent in 1960 to 101,982,000,000 kilowatt hours from 93,656,000,000 in 1959. The annual rate of increase of 6.3 per cent over the next four years is expected to result in a firm energy requirement of 130,256,000,000 kilowatt hours by 1964. The comparative stability of the rate of growth in firm energy requirement is evidenced by the fact that annual increments during the period 1950-1959 was 7.3 per cent.

Firm energy requirement within provinces showed much wider variations. During the eight-year period 1956-1964, firm energy requirement will increase 147.8 per cent in Saskatchewan, 125.8 per cent in Alberta and 122.6 per cent in Prince Edward Island. The comparable rate of growth for all Canada is 59.9 per cent.

Chart A - Net Generating Capability Within Canada (Page 10): This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.

Chart B - Net Capability and Firm Demand Within Canada (Page 11): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart C - Net Generating Capability Within Provinces (Pages 12-13): Chart C illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.

Chart D - Net Capability and Firm Demand Within Provinces (Pages 14-15): This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement Within Canada (Page 16): Chart E shows the growth in Canadian firm energy requirement during the period 1950 - 1964.

Table 1 - Summary (Pages 17-28): This table summarizes capability, firm power peak load, indicated reserve and firm energy requirement for Canada and for each of the provinces.

Table 2 - Net Generating Capability Within Provinces (Page 29): This table compares provincial rates of growth in net generating capability.

Table 3 - Firm Power Peak Load Within Provinces (Page 30): This table compares rates of growth of firm power peak load within provinces.

Table 4 - Indicated Firm Energy Requirement Within Provinces (Page 31): This table compares rates of growth of firm energy requirement within provinces.

Table 5 - Indicated Reserve (Pages 32-34): This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power deliveries outside the province. Gross capability consists of net generating capability (hydro and thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm demand is the indicated reserve, and this, expressed as a percentage of total firm demand, can be used as a measurement of the industry's ability to satisfy demand and meet contingencies. Since not all systems are fully interconnected it should be remembered that reserves of power cannot always be completely utilized.



## DEFINITIONS

### FIRM ENERGY REQUIREMENT

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

### FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

### FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT.

### FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

### INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

### INDICATED RESERVE

Net capability less indicated demand (+ or -).

### INDUSTRIAL ESTABLISHMENT

A firm which generates power primarily for use in own plants.

### NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.



NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

SYSTEM

Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

UTILITY

The Company, Commission, or UTILITY reporting or included in a SYSTEM report under Section IV (which generates at least part of its own power).

CHART-A

# NET GENERATING CAPABILITY WITHIN CANADA

1950-1964

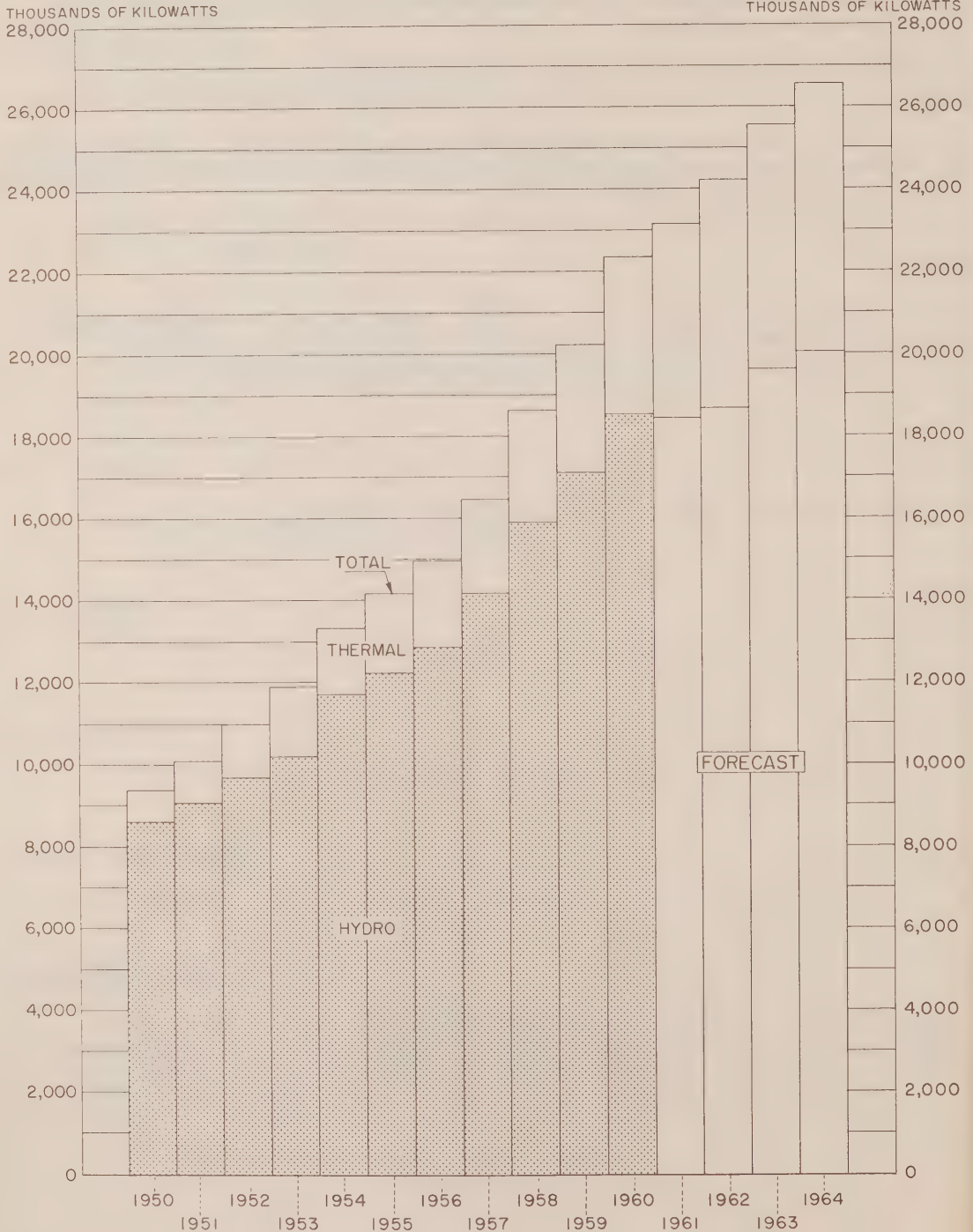


CHART - B

# NET CAPABILITY AND FIRM DEMAND WITHIN CANADA

1950-1964

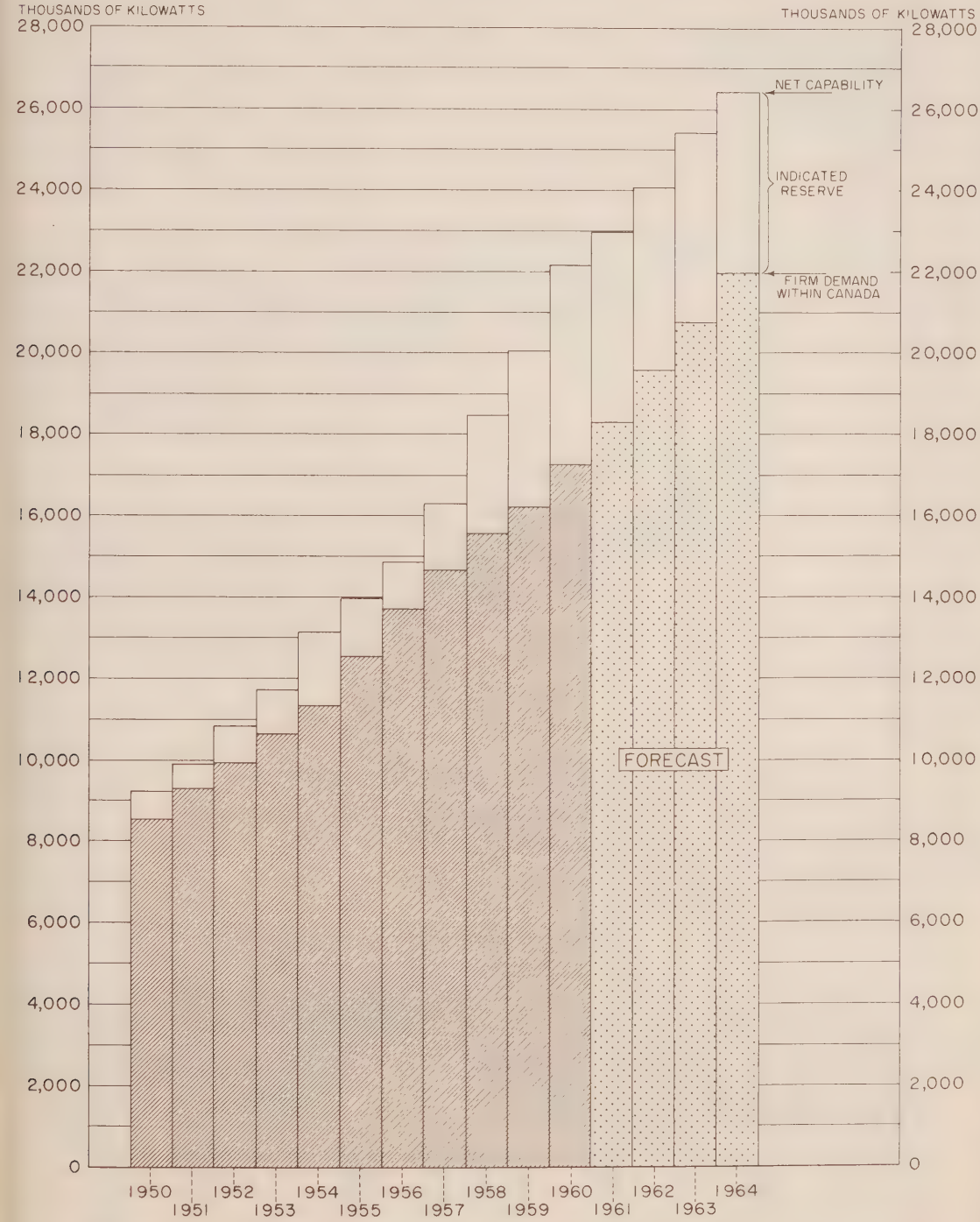
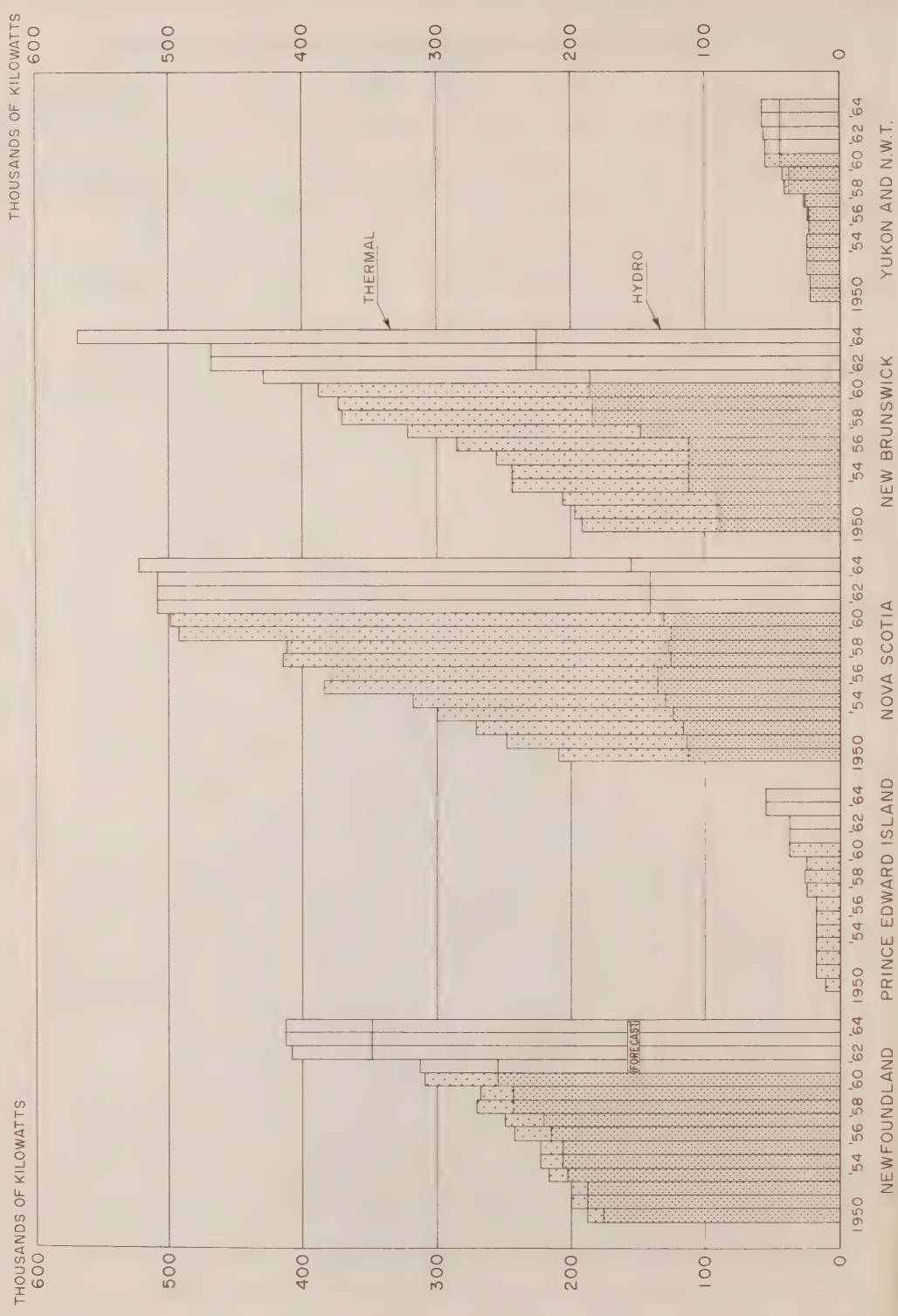


CHART - C

# NET GENERATING CAPABILITY WITHIN PROVINCES

1950-1964



NET GENERATING CAPABILITY WITHIN PROVINCES  
1950-1964

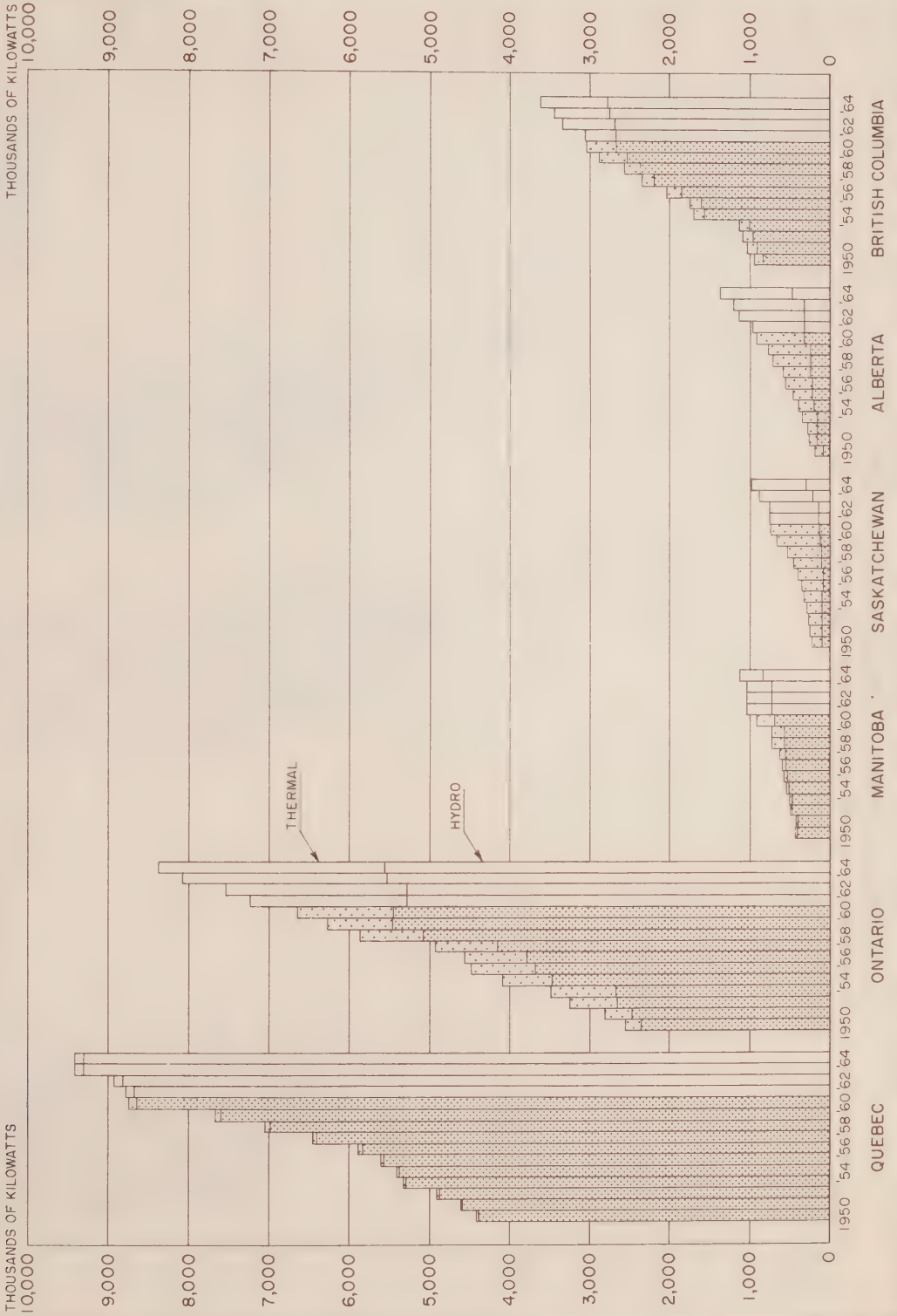
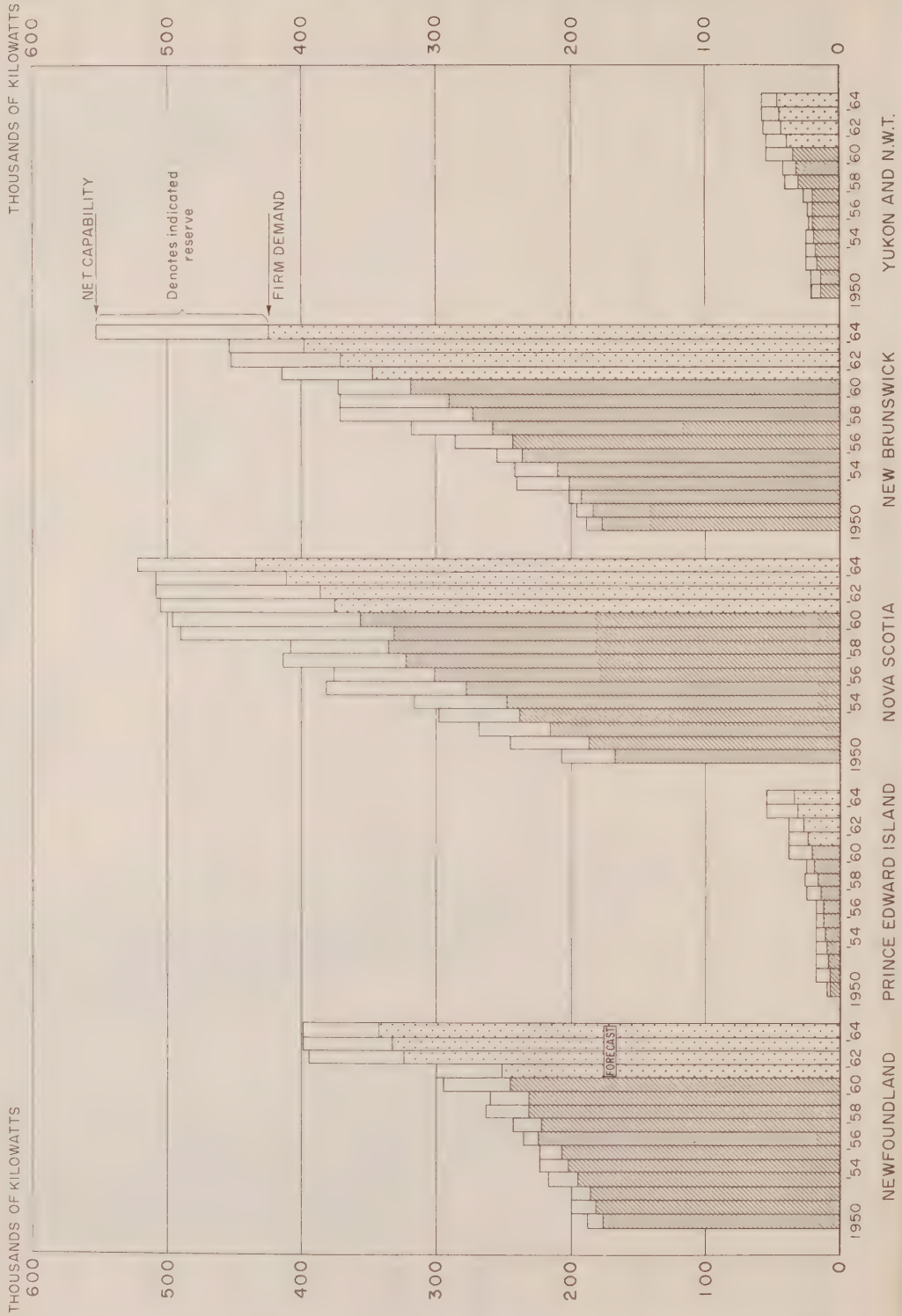




CHART-D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1950-1964



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1950 - 1964

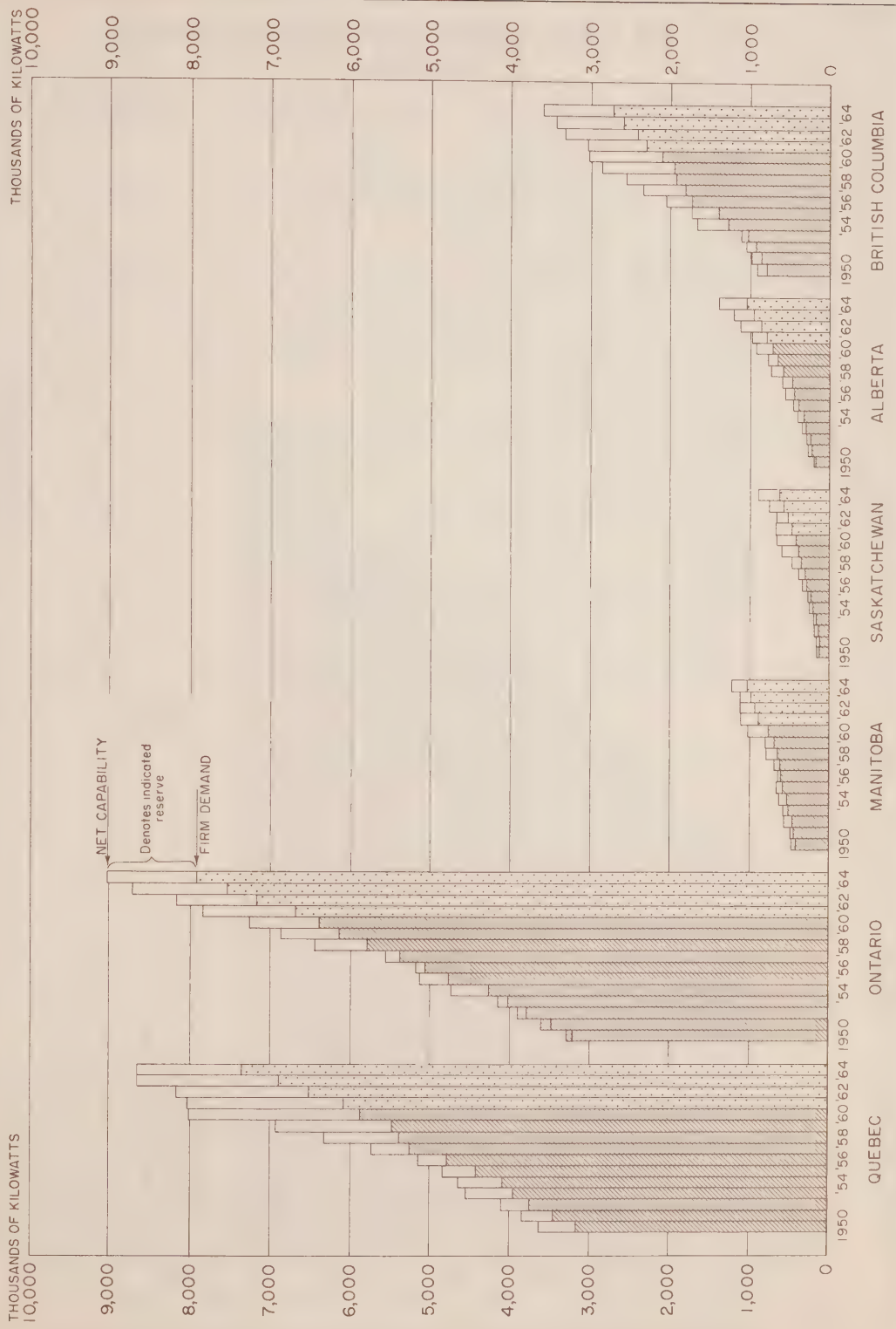
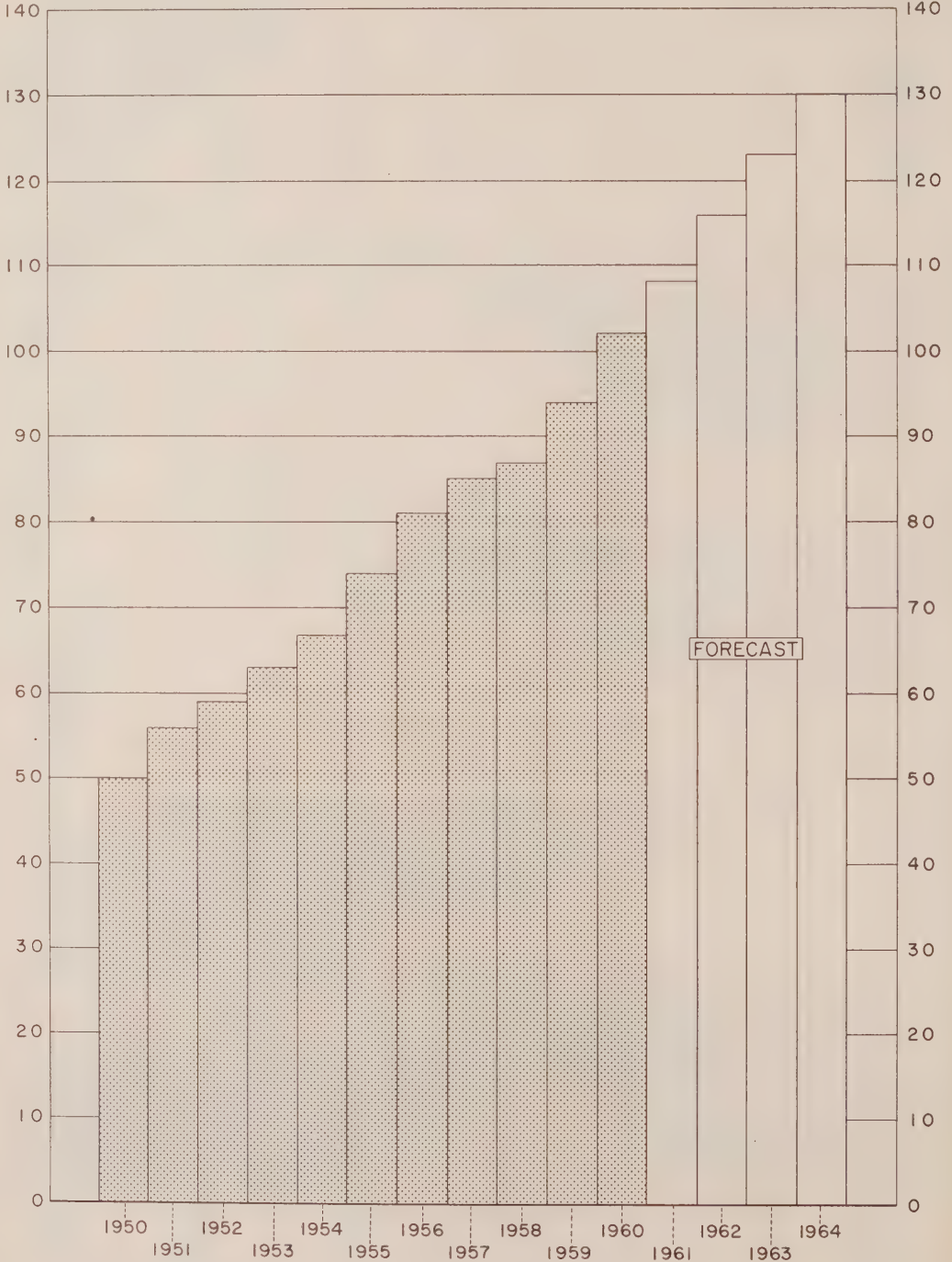


CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1950-1964

BILLIONS OF KILOWATTHOURS

BILLIONS OF KILOWATTHOURS



	1950	1955	1956	1957	1958	1959	1960	FORECAST			
								1961	1962	1963	1964
CAPABILITY:											
Thousands of kilowatts											
1. Net generating capability:											
(a) Hydro	8,596	12,211	12,841	14,143	15,912	17,086	18,516	18,405	18,677	19,619	20,022
(b) Thermal	788	1,936	2,142	2,326	2,716	3,119	3,824	4,758	5,519	5,934	6,508
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	5	56	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	176	166	147	150	152	152	166	168	123	125	122
4. Net capability (1 + 2 - 3)	9,208	13,986	14,892	16,319	18,476	20,053	22,174	22,995	24,073	25,428	26,408
FIRM POWER PEAK LOAD:											
ACTUAL											
5. Within Canada	8,313	12,472	13,668	14,664	15,568	16,201	17,264	18,292	19,587	20,757	21,989
6. Indicated shortage	217	64	47	2	-	-	-	-	-	-	-
7. Indicated demand within Canada (5 + 6)	8,530	12,536	13,715	14,666	15,568	16,201	17,264	18,292	19,587	20,757	21,989
INDICATED RESERVE:											
Millions of kilowatt-hours											
8. Difference (4 - 7)	+ 678	+1,450	+1,177	+1,653	+2,908	+3,852	+4,910	+4,703	+4,486	+4,671	+4,419
FIRM ENERGY REQUIREMENT:											
Millions of kilowatt-hours											
9. Firm energy requirement within Canada	49,627	73,748	79,913	84,222	87,102	93,656	101,982	107,865	115,522	122,688	130,256
10. Indicated shortage	378	378	1,546	554	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Canada (9 + 10)	50,005	74,126	81,459	84,776	87,102	93,656	101,982	107,865	115,522	122,688	130,256
12. Deliveries of firm energy to:											
(a) Other provinces	1,418	1,332	1,226	1,172	1,264	1,253	1,283	1,306	1,028	935	938
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	1,418	1,332	1,226	1,172	1,264	1,253	1,283	1,306	1,028	935	938
13. Firm energy requirement on Canada (11 + 12)	51,423	75,458	82,685	85,948	88,366	94,909	105,265	108,171	116,550	123,623	131,194



TABLE 1. Summary - Newfoundland (Including Labrador)

	1950	1955	1956	1957	1958	1959	1960	FORECAST			
								1961	1962	1963	1964
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	176	207	215	220	243	243	255	255	348	348	348
(b) Thermal	12	16	27	29	28	24	54	58	60	64	64
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	6	6	8	7	14	13	13	13	13
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	188	223	236	243	263	260	295	300	395	399	399
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Province	177	206	222	222	231	231	245	251	324	332	342
6. Indicated shortage	-	1	2	-	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	177	207	224	222	231	231	245	251	324	332	342
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+11	+16	+12	+21	+32	+29	+50	+49	+71	+67	+57
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within Province	1,058	1,289	1,374	1,333	1,320	1,369	1,429	1,462	1,674	1,715	1,788
10. Indicated shortage	-	10	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	1,058	1,299	1,374	1,333	1,320	1,369	1,429	1,462	1,674	1,715	1,788
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	31	46	44	33	49	49	49	49	49
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	31	46	44	33	49	49	49	49	49
13. Firm energy requirement on Province (11 + 12)	1,058	1,299	1,405	1,379	1,364	1,402	1,478	1,511	1,723	1,764	1,837



TABLE 1. Summary - Prince Edward Island

	Thousands of kilowatts							FORECAST			
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	-	18	18	-	-	-	-	-	38	38	55
(b) Thermal	-	-	-	-	26	25	38	-	-	-	-
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	10	18	18	25	26	25	38	38	38	55	55
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Province	8	12	12	14	16	19	21	24	27	31	34
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	8	12	12	14	16	19	21	24	27	31	34
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 2	+ 6	+ 6	+11	+10	+ 6	+17	+14	+11	+24	+21
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within Province	-	31	51	53	60	69	81	85	90	98	118
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	31	51	53	60	69	81	85	90	98	108	118
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on Province (11 + 12)	31	51	53	60	69	81	85	90	98	108	118

TABLE 1. Summary - Nova Scotia

	1950	1955	1956	1957	1958	1959	1960	FORECAST			
	Thousands of kilowatts							1961	1962	1963	1964
<b>CAPABILITY:</b>											
1. Net generating capability:											
(a) Hydro	113	136	136	126	127	126	132	141	141	141	155
(b) Thermal	96	248	242	289	284	367	367	367	367	367	367
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	2	2	2	2	3	3	3	3	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	207	382	376	413	408	490	496	505	508	508	522
<b>FIRM POWER PEAK LOAD:</b>											
5. Within Province	163	278	301	322	335	330	356	375	386	411	434
6. Indicated shortage	4	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	167	278	301	322	335	330	356	375	386	411	434
<b>INDICATED RESERVE:</b>											
8. Difference (4 - 7)	+ 40	+ 104	+ 75	+ 91	+ 73	+ 160	+ 140	+ 130	+ 122	+ 97	+ 88
<b>FIRM ENERGY REQUIREMENT:</b>											
9. Firm energy requirement within Province	874	1,340	1,464	1,447	1,551	1,634	1,707	1,828	1,923	2,027	2,137
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	874	1,340	1,464	1,447	1,551	1,634	1,707	1,828	1,923	2,027	2,137
12. Deliveries of firm energy to:											
(a) Other provinces	6	8	8	8	10	14	79	6	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	6	8	8	8	10	14	79	6	-	-	-
13. Firm energy requirement on Province (11 + 12)	880	1,348	1,472	1,455	1,561	1,648	1,786	1,834	1,923	2,027	2,137

TABLE 1. Summary - New Brunswick

	1950	1955	1956	1957	1958	1959	1960	FORECAST				
	Thousands of kilowatts								1961	1962	1963	1964
CAPABILITY:												
1. Net generating capability:												
(a) Hydro	90	112	112	148	185	185	186	186	226	226	226	
(b) Thermal	102	144	174	173	187	188	202	243	243	243	343	
2. Receipts of firm power from:												
(a) Other provinces	2	4	5	5	8	7	7	7	5	5	5	
(b) United States	-	-	-	-	-	-	-	-	-	-	-	
3. Deliveries of firm power to:												
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-	
(b) United States	5	5	5	8	9	9	23	22	22	21	21	
4. Net capability (1 + 2 - 3)	189	255	286	318	371	371	372	414	452	453	553	
FIRM POWER PEAK LOAD:												
5. Within Province	177	235	243	258	273	291	319	347	371	398	424	
6. Indicated shortage	-	1	-	-	-	-	-	-	-	-	-	
7. Indicated demand within Province (5 + 6)	177	236	243	258	273	291	319	347	371	398	424	
INDICATED RESERVE:												
8. Difference (4 - 7)	+ 12	+ 19	+ 43	+ 60	+ 98	+ 80	+ 53	+ 67	+ 81	+ 55	+ 129	
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within Province	970	1,248	1,275	1,347	1,402	1,523	1,667	1,888	2,014	2,182	2,292	
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-	
11. Indicated firm energy requirement within Province (9 + 10)	970	1,248	1,275	1,347	1,402	1,523	1,667	1,888	2,014	2,182	2,292	
12. Deliveries of firm energy to:												
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-	
(b) United States	41	33	32	29	63	51	58	136	135	139	142	
(c) Total (a + b)	41	33	32	29	63	51	58	136	135	139	142	
13. Firm energy requirement on Province (11 + 12)	1,011	1,281	1,307	1,376	1,465	1,574	1,725	2,024	2,149	2,321	2,434	

TABLE 1. Summary - Quebec

	1950	1955	1956	1957	1958	1959	1960	FORECAST			
	Thousands of kilowatts							1961	1962	1963	1964
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	4,391	5,583	5,854	6,406	6,992	7,612	8,658	8,678	8,816	9,311	9,311
(b) Thermal	26	36	36	55	61	69	106	106	111	111	111
2. Receipts of firm power from:											
(a) Other provinces	1	1	7	7	9	9	16	15	15	15	15
(b) United States	-	5	4	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	732	729	691	694	673	696	698	700	703	707	708
(b) United States	56	56	56	56	57	57	57	56	56	57	56
4. Net capability (1 + 2 - 3)	3,630	4,840	5,154	5,718	6,332	6,937	8,025	8,043	8,183	8,673	8,673
FIRM POWER PEAK LOAD:											
5. Within Province	3,174	4,367	4,749	5,256	5,375	5,466	5,871	6,103	6,521	6,911	7,353
6. Indicated shortage	-	44	44	2	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	3,174	4,411	4,793	5,258	5,375	5,466	5,871	6,103	6,521	6,911	7,353
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 456	+ 429	+ 361	+ 460	+ 957	+1,471	+2,154	+1,940	+1,662	+1,762	+1,320
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Province	20,442	29,479	30,331	30,572	31,763	33,303	38,323	39,958	42,932	45,874	49,048
10. Indicated shortage	123	362	1,546	540	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	20,565	29,841	31,877	31,112	31,763	33,303	38,323	29,958	42,932	45,874	49,048
12. Deliveries of firm energy to:											
(a) Other provinces	4,425	4,260	4,117	4,075	4,205	4,211	4,193	4,202	4,220	4,234	4,240
(b) United States	490	490	491	485	490	492	496	491	491	491	491
(c) Total (a + b)	4,915	4,750	4,608	4,560	4,695	4,703	4,689	4,693	4,711	4,725	4,731
13. Firm energy requirement on Province (11 + 12)	25,480	34,591	36,485	35,672	36,458	38,006	43,012	44,651	47,643	50,599	53,779

CAPABILITY:

## 1. Net generating capability:

- (a) Hydro  
(b) Thermal

## 2. Receipts of firm power from:

- (a) Other provinces  
(b) United States

## 3. Deliveries of firm power to:

- (a) Other provinces  
(b) United States

## 4. Net capability (1 + 2 - 3)

FIRM POWER PEAK LOAD:

## 5. Within Province

## 6. Indicated shortage

## 7. Indicated demand within Province (5 + 6)

INDICATED RESERVE:

## 8. Difference (4 - 7)

FIRM ENERGY REQUIREMENT:

## 9. Firm energy requirement within Province

## 10. Indicated shortage

## 11. Indicated firm energy requirement within Province (9 + 10)

## 12. Deliveries of firm energy to:

- (a) Other provinces  
(b) United States

## (c) Total (a + b)

## 13. Firm energy requirement on Province (11 + 12)

	Thousands of kilowatts										FORECAST			
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964			
CAPABILITY:														
1. Net generating capability:														
(a) Hydro	2,367	3,688	3,778	4,145	5,081	5,467	5,464	5,286	5,286	5,543	5,557			
(b) Thermal	199	800	787	787	800	808	1,186	1,956	2,254	2,537	2,819			
2. Receipts of firm power from:														
(a) Other provinces	741	741	702	705	668	692	694	696	699	702	703			
(b) United States	-	-	-	-	-	-	-	-	-	-	-			
3. Deliveries of firm power to:														
(a) Other provinces	1	1	1	1	1	2	2	2	2	2	2			
(b) United States	85	85	86	86	86	86	86	90	45	47	45			
4. Net capability (1 + 2 - 3)														
	3,221	5,143	5,180	5,550	6,462	6,879	7,256	7,846	8,192	8,733	9,032			
FIRM POWER PEAK LOAD:														
5. Within Province														
	3,078	4,757	5,064	5,369	5,794	6,154	6,391	6,690	7,166	7,533	7,939			
6. Indicated shortage														
	213	18	-	-	-	-	-	-	-	-	-			
7. Indicated demand within Province (5 + 6)														
	3,291	4,775	5,064	5,369	5,794	6,154	6,391	6,690	7,166	7,533	7,939			
INDICATED RESERVE:														
8. Difference (4 - 7)														
	- 70	+ 368	+ 116	+ 181	+ 668	+ 725	+ 865	+1,156	+1,026	+1,200	+1,093			
FIRM ENERGY REQUIREMENT:														
9. Firm energy requirement within Province														
	18,016	26,376	28,875	30,768	31,401	34,844	36,216	37,700	40,423	42,383	44,750			
10. Indicated shortage														
	255	6	-	-	-	-	-	-	-	-	-			
11. Indicated firm energy requirement within Province (9 + 10)														
	18,271	26,382	28,875	30,768	31,401	34,844	36,216	37,700	40,423	42,383	44,750			
12. Deliveries of firm energy to:														
(a) Other provinces	2	3	4	4	5	5	6	6	6	6	6			
(b) United States	703	687	703	658	711	710	727	677	400	303	303			
(c) Total (a + b)														
	705	690	707	662	716	715	733	683	406	309	309			
13. Firm energy requirement on Province (11 + 12)														
	18,976	27,072	29,582	31,430	32,117	35,559	36,949	38,383	40,829	42,692	45,059			



TABLE 1. Summary - Manitoba

											FORECAST			
											1961	1962	1963	1964
1950	1955	1956	1957	1958	1959	1960								
Thousands of kilowatts														
CAPABILITY:														
1. Net generating capability:														
(a) Hydro	418	547	556	561	566	566	701	735	735	735	840			
(b) Thermal	10	46	46	78	168	168	231	294	294	294	294			
2. Receipts of firm power from:														
(a) Other provinces	68	79	64	69	68	72	86	86	87	137	87			
(b) United States	-	-	-	-	-	-	-	-	-	-	-			
3. Deliveries of firm power to:														
(a) Other provinces	9	14	14	14	-	-	-	-	-	-	-			
(b) United States	-	-	-	-	-	-	-	-	-	-	-			
4. Net capability (1 + 2 - 3)	487	658	652	694	802	806	1,018	1,115	1,116	1,116	1,221			
FIRM POWER PEAK LOAD:														
5. Within Province	419	594	605	608	646	690	772	898	944	989	1,029			
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-			
7. Indicated demand within Province (5 + 6)	419	594	605	608	646	690	772	898	944	989	1,029			
INDICATED RESERVE:														
8. Difference (4 - 7)	+ 68	+ 64	+ 47	+ 86	+ 156	+ 116	+ 246	+ 217	+ 172	+ 177	+ 192			
FIRM ENERGY REQUIREMENT:														
9. Firm energy requirement within Province	2,218	3,122	3,414	3,435	3,557	3,828	4,086	5,026	5,325	5,607	5,908			
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-			
11. Indicated firm energy requirement within Province (9 + 10)	2,218	3,122	3,414	3,435	3,557	3,828	4,086	5,026	5,325	5,607	5,908			
12. Deliveries of firm energy to:														
(a) Other provinces	79	114	94	136	-	-	-	-	-	-	-			
(b) United States	-	-	-	-	-	-	-	-	-	-	-			
(c) Total (a + b)	79	114	94	136	-	-	-	-	-	-	-			
13. Firm energy requirement on Province (11 + 12)	2,297	3,236	3,508	3,571	3,557	3,828	4,086	5,026	5,325	5,607	5,908			

	Thousands of kilowatts							FORECAST			
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	85	82	82	87	87	88	99	103	103	203	304
(b) Thermal	129	257	320	376	451	583	653	653	653	683	683
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	1	1	1	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	68	79	64	69	68	72	86	86	87	137	87
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	146	260	338	394	471	600	667	670	669	749	900
FIRM POWER PEAK LOAD:											
5. Within Province	128	227	278	299	353	377	418	470	517	567	621
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	128	227	278	299	353	377	418	470	517	567	621
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 18	+ 33	+ 60	+ 95	+ 118	+ 223	+ 249	+ 200	+ 152	+ 182	+ 279
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Province	405	877	1,047	1,276	1,422	1,527	1,698	1,915	2,116	2,353	2,594
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	405	877	1,047	1,276	1,422	1,527	1,698	1,915	2,116	2,353	2,594
12. Deliveries of firm energy to:											
(a) Other provinces	500	571	554	503	504	517	575	572	614	614	614
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	500	571	554	503	504	517	575	572	614	614	614
13. Firm energy requirement on Province (11 + 12)	905	1,448	1,601	1,779	1,926	2,044	2,273	2,521	2,730	2,967	3,208

TABLE 1. Summary - Alberta

	1950	1955	1956	1957	1958	1959	1960	FORECAST				
	Thousands of kilowatts								1961	1962	1963	1964
CAPABILITY:												
1. Net generating capability:												
(a) Hydro	83	220	220	238	238	238	318	318	318	318	468	
(b) Thermal	108	238	338	350	496	530	607	655	809	878	915	
2. Receipts of firm power from:												
(a) Other provinces	-	-	4	4	4	3	3	3	5	7	9	
(b) United States	-	-	-	-	-	-	-	-	-	-	-	
3. Deliveries of firm power to:												
(a) Other provinces	3	3	-	-	1	1	1	-	-	-	-	
(b) United States	-	-	-	-	-	-	-	-	-	-	-	
4. Net capability (1 + 2 - 3)	188	455	562	592	737	770	927	976	1,132	1,203	1,392	
FIRM POWER PEAK LOAD:												
	ACTUAL								FORECAST			
5. Within Province	176	391	451	476	580	649	714	792	870	955	1,044	
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-	
7. Indicated demand within Province (5 + 6)	176	391	451	476	580	649	714	792	870	955	1,044	
INDICATED RESERVE:												
8. Difference (4 - 7)	+ 12	+ 64	+ 111	+ 116	+ 157	+ 121	+ 213	+ 184	+ 262	+ 248	+ 348	
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within Province	1,023	1,859	2,180	2,424	2,760	3,156	3,481	3,778	4,125	4,508	4,923	
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-	
11. Indicated firm energy requirement within Province (9 + 10)	1,023	1,859	2,180	2,424	2,760	3,156	3,481	3,778	4,125	4,508	4,923	
12. Deliveries of firm energy to:												
(a) Other provinces	14	-	-	-	-	5	3	-	-	-	-	
(b) United States	-	-	-	-	-	-	-	-	-	-	-	
(c) Total (a + b)	14	-	-	-	-	5	3	-	-	-	-	
13. Firm energy requirement on Province (11 + 12)	1,037	1,859	2,180	2,424	2,760	3,161	3,484	3,778	4,125	4,508	4,923	

	1950	1955	1956	1957	1958	1959	1960	FORECAST			
	Thousands of kilowatts							1961	1962	1963	1964
CAPABILITY:											
1. Net generating capability:											
(a) Hydro	852	1,614	1,866	2,187	2,356	2,524	2,659	2,659	2,660	2,750	2,769
(b) Thermal	96	133	153	163	212	353	369	377	678	689	844
2. Receipts of firm power from:											
(a) Other provinces	3	3	-	-	-	-	-	-	-	-	-
(b) United States	-	-	52	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	4	4	4	3	3	3	5	7	9
(b) United States	30	20	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	921	1,730	2,067	2,346	2,564	2,874	3,025	3,033	3,333	3,432	3,604
FIRM POWER PEAK LOAD:											
5. Within Province	799	1,386	1,724	1,821	1,935	1,963	2,123	2,303	2,418	2,586	2,724
6. Indicated shortage	-	-	1	-	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	799	1,386	1,725	1,821	1,935	1,963	2,123	2,303	2,418	2,586	2,724
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 122	+ 344	+ 342	+ 525	+ 629	+ 911	+ 902	+ 730	+ 915	+ 846	+ 880
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Province	4,523	8,011	9,802	11,445	11,726	12,234	13,130	14,029	14,695	15,729	16,494
10. Indicated shortage	-	-	-	14	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	4,523	8,011	9,802	11,459	11,726	12,234	13,130	14,029	14,695	15,729	16,494
12. Deliveries of firm energy to:											
(a) Other provinces	-	10	10	9	6	6	3	3	3	3	4
(b) United States	184	122	-	-	-	-	2	2	2	2	2
(c) Total (a + b)	184	132	10	9	6	6	5	5	5	5	6
13. Firm energy requirement on Province (11 + 12)	4,707	8,143	9,812	11,468	11,732	12,240	13,135	14,034	14,700	15,734	16,500

TABLE 1. Summary - Yukon and Northwest Territories

	1950	1955	1956	1957	1958	1959	1960	FORECAST			
								1961	1962	1963	1964
CAPABILITY:											
Thousands of kilowatts											
1. Net generating capability:											
(a) Hydro	21	22	22	25	37	37	44	44	44	44	44
(b) Thermal	-	-	1	1	3	4	11	11	12	13	13
2. Receipts of firm power from:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
3. Deliveries of firm power to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
4. Net capability (1 + 2 - 3)	21	22	23	26	40	41	55	55	56	57	57
FIRM POWER PEAK LOAD:											
Millions of kilowatt-hours											
5. Within Province	14	19	19	19	30	31	34	39	43	44	45
6. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
7. Indicated demand within Province (5 + 6)	14	19	19	19	30	31	34	39	43	44	45
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 7	+ 3	+ 4	+ 7	+ 10	+ 10	+ 21	+ 16	+ 13	+ 13	+ 12
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Province	67	96	98	115	131	157	160	191	197	202	204
10. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
11. Indicated firm energy requirement within Province (9 + 10)	67	96	98	115	131	157	160	191	197	202	204
12. Deliveries of firm energy to:											
(a) Other provinces	-	-	-	-	-	-	-	-	-	-	-
(b) United States	-	-	-	-	-	-	-	-	-	-	-
(c) Total (a + b)	-	-	-	-	-	-	-	-	-	-	-
13. Firm energy requirement on Province (11 + 12)	67	96	98	115	131	157	160	191	197	202	204



TABLE 2. Net Generating Capability Within Provinces(1)

P R O V I N C E	T h o u s a n d s o f k i l o w a t t s							F O R E C A S T				P E R C E N T A G E C H A N G E		
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956 1960	1960 1964	1956 1964
Newfoundland (including Labrador)	188	223	242	249	271	267	309	313	408	412	412	27.7	33.3	70.2
Prince Edward Island	10	18	18	25	26	25	38	38	38	55	55	111.0	44.7	206.0
Nova Scotia	209	384	378	415	411	493	499	508	508	508	522	32.0	4.6	38.1
New Brunswick	192	256	286	321	372	373	388	429	469	469	569	35.7	46.7	99.0
Quebec	4,417	5,619	5,890	6,461	7,053	7,681	8,764	8,784	8,927	9,422	9,422	48.8	7.5	60.0
Ontario	2,566	4,488	4,565	4,932	5,881	6,275	6,650	7,242	7,540	8,080	8,376	45.7	26.0	83.5
Manitoba	428	593	602	639	734	734	932	1,029	1,029	1,029	1,134	54.8	21.7	88.4
Saskatchewan	214	339	402	463	538	671	752	756	756	886	987	87.1	31.3	145.5
Alberta	191	458	558	588	734	768	925	973	1,127	1,196	1,383	65.8	49.5	147.8
British Columbia	948	1,747	2,019	2,350	2,568	2,877	3,028	3,036	3,338	3,439	3,613	50.0	19.3	78.9
Yukon and N.W.T.	21	22	23	26	40	41	55	55	56	57	57	139.1	3.6	147.8
CANADA	9,384	14,147	14,983	16,469	18,628	20,205	22,340	23,163	24,196	25,553	26,530	49.1	18.8	77.1

(1) Hydro plus thermal (Table I, item 1 a + 1 b).

TABLE 3. Firm Power Peak Load Within Provinces(1)

P R O V I N C E	T h o u s a n d s o f k i l o w a t t s							F O R E C A S T				P E R C E N T A G E C H A N G E	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956 1960	1956 1964
Newfoundland (including Labrador)	177	206	222	222	231	231	245	251	324	332	342	10.4	39.6 54.1
Prince Edward Island	8	12	12	14	16	19	21	24	27	31	34	75.0	61.9 183.3
Nova Scotia	163	278	301	322	335	330	356	375	386	411	434	18.3	21.9 44.2
New Brunswick	177	235	243	258	273	291	319	347	371	398	424	31.3	32.9 74.5
Quebec	3,174	4,367	4,749	5,256	5,375	5,466	5,871	6,103	6,521	6,911	7,353	23.6	25.2 54.8
Ontario	3,078	4,757	5,064	5,369	5,794	6,154	6,391	6,690	7,166	7,533	7,939	26.2	24.2 56.8
Manitoba	419	594	605	608	646	690	772	898	944	989	1,029	27.6	33.3 70.1
Saskatchewan	128	227	278	299	353	377	418	470	517	567	621	50.4	48.6 123.4
Alberta	176	391	451	476	580	649	714	792	870	955	1,044	58.3	46.2 131.5
British Columbia	799	1,386	1,724	1,821	1,935	1,963	2,123	2,303	2,418	2,586	2,724	23.1	28.3 58.0
Yukon and N.W.T.	14	19	19	19	30	31	34	39	43	44	45	78.9	32.4 136.8
CANADA	8,313	12,472	13,668	14,664	15,568	16,201	17,264	18,292	19,587	20,757	21,989	26.3	27.4 60.9

(1) Indicated Firm Demand (Table I, item 7).

TABLE 4. Indicated Firm Energy Requirement Within Provinces(1)

P R O V I N C E	M i l l i o n s o f K i l o w a t t H o u r s										F O R E C A S T			P E R C E N T A G E C H A N G E		
	1950	1955	1956	1957	1958	1959	1960				1961	1962	1963	1964	1956 1960	1960 1964
Newfoundland (including Labrador)	1,058	1,299	1,374	1,333	1,320	1,369	1,429				1,462	1,674	1,715	1,788	4.0	25.1
Prince Edward Island	31	51	53	60	69	81	85				90	98	108	118	60.4	38.8
Nova Scotia	874	1,340	1,464	1,447	1,551	1,634	1,707				1,828	1,923	2,027	2,137	16.6	25.2
New Brunswick	970	1,248	1,275	1,347	1,402	1,523	1,667				1,888	2,014	2,182	2,292	30.7	37.5
Quebec	20,565	29,841	31,877	31,112	31,763	33,303	38,323				39,958	42,932	45,874	49,048	20.2	28.0
Ontario	18,271	26,382	28,875	30,768	31,401	34,844	36,216				37,700	40,423	42,383	44,750	25.4	23.6
Manitoba	2,218	3,122	3,414	3,435	3,557	3,828	4,086				5,026	5,325	5,607	5,908	19.7	44.6
Saskatchewan	405	877	1,047	1,276	1,422	1,527	1,698				1,915	2,116	2,353	2,594	62.2	52.8
Alberta	1,023	1,859	2,180	2,424	2,760	3,156	3,481				3,778	4,125	4,508	4,923	59.7	41.4
British Columbia	4,523	8,011	9,802	11,459	11,726	12,234	13,130				14,029	14,695	15,729	16,494	34.0	25.6
Yukon and N.W.T.	67	96	98	115	131	157	160				191	197	202	204	63.3	27.5
CANADA	50,005	74,126	81,459	84,776	87,102	93,656	101,928				107,865	115,522	122,688	130,256	25.1	27.8

(1) Table I, item 11.

TABLE 5. Indicated Reserve(1)

P R O V I N C E	1950 1955 1956 1957 1958 1959 1960							F O R E C A S T				P E R C E N T A G E C H A N G E			
								1961	1962	1963	1964	1956	1960	1956-	1964
	Thousands of Kilowatts														
Newfoundland (including Labrador)															
1. Gross capability	188	223	242	249	271	267	309	313	408	412	412	27.7	33.3	70.2	
2. Total firm demand on the province	177	207	230	228	239	238	259	264	337	345	355	26.1	37.1	54.3	
3. Indicated reserve (1 - 2)	11	16	12	21	32	29	50	49	71	67	57	...	...	...	
4. Indicated reserve expressed as a % of total firm demand	6.2	7.7	5.2	9.2	13.4	12.2	19.3	18.6	21.1	19.4	16.1	...	...	...	
Prince Edward Island															
1. Gross capability	10	18	18	25	26	25	38	38	38	55	55	111.1	44.7	205.6	
2. Total firm demand on the province	8	12	12	14	16	19	21	24	27	31	34	75.0	61.9	183.3	
3. Indicated reserve (1 - 2)	2	6	6	11	10	6	17	14	11	24	21	...	...	...	
4. Indicated reserve expressed as a % of total firm demand	25.0	50.0	50.0	78.6	62.5	31.6	18.1	58.3	40.7	77.4	61.8	...	...	...	
Nova Scotia															
1. Gross capability	209	384	378	415	411	493	499	508	508	508	522	32.0	4.6	38.1	
2. Total firm demand on the province	169	280	303	324	338	333	359	378	386	411	434	18.5	20.9	43.2	
3. Indicated reserve (1 - 2)	40	104	75	91	73	160	140	130	122	97	88	...	...	...	
4. Indicated reserve expressed as a % of total firm demand	23.7	37.1	24.8	28.1	21.6	48.0	39.0	34.4	31.6	23.6	20.3	...	...	...	
New Brunswick															
1. Gross capability	194	260	291	326	380	380	395	436	474	474	574	35.7	45.3	97.3	
2. Total firm demand on the province	182	241	248	266	282	300	342	369	393	419	465	37.9	36.0	87.5	
3. Indicated reserve (1 - 2)	12	19	43	60	98	80	53	67	81	55	109	...	...	...	
4. Indicated reserve expressed as a % of total firm demand	6.6	7.9	17.3	22.6	34.8	26.7	15.5	18.2	20.6	13.1	23.4	...	...	...	

See footnotes at end of table.

TABLE 5. Indicated Reserve(1) - Continued

P R O V I N C E	1950 1955 1956 1957 1958 1959 1960							F O R E C A S T				P E R C E N T A G E C H A N G E					
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956	1960	1964	1956	1960	1964
Thousands of Kilowatts																	
Quebec																	
1. Gross capability	4,418	5,625	5,901	6,468	7,062	7,690	8,780	8,799	8,942	9,437	9,437	48.8	7.5	59.9			
2. Total firm demand on the province	3,962	5,196	5,540	6,008	6,105	6,219	6,626	6,859	7,281	7,675	8,117	19.6	25.0	46.5			
3. Indicated reserve (1 - 2)	456	429	361	460	957	1,471	2,154	1,940	1,661	1,762	1,320	...	...	...			
4. Indicated reserve expressed as a % of total firm demand	11.2	8.3	6.5	7.7	15.7	23.6	32.5	28.3	22.8	23.0	16.3	...	...	...			
Ontario																	
1. Gross capability	3,307	5,229	5,267	5,637	6,549	6,967	7,344	7,938	8,239	8,782	9,079	39.4	23.6	72.4			
2. Total firm demand on the province	3,377	4,861	5,151	5,456	5,881	6,242	6,479	6,782	7,213	7,582	7,986	25.8	23.3	55.0			
3. Indicated reserve (1 - 2)	- 70	368	116	181	668	725	865	1,156	1,026	1,200	1,093	...	...	...			
4. Indicated reserve expressed as a % of total firm demand	-	7.7	2.3	3.3	11.4	11.6	13.4	17.0	14.2	15.8	13.7	...	...	...			
Manitoba																	
1. Gross capability	496	672	666	708	802	806	1,018	1,115	1,116	1,166	1,221	52.9	19.9	83.3			
2. Total firm demand on the province	428	608	619	622	646	690	772	898	944	989	1,029	12.5	33.3	66.2			
3. Indicated reserve (1 - 2)	68	64	47	86	156	116	246	217	172	177	192	...	...	...			
4. Indicated reserve expressed as a % of total firm demand	15.9	10.5	7.6	13.8	24.1	16.8	13.2	24.2	18.2	12.8	18.7	...	...	...			
Saskatchewan																	
1. Gross capability	214	339	402	463	539	672	753	756	756	886	987	87.3	31.1	145.5			
2. Total firm demand on the province	196	306	342	368	421	449	504	556	604	704	708	47.4	40.5	107.0			
3. Indicated reserve (1 - 2)	18	33	60	95	118	223	249	200	152	182	279	...	...	...			
4. Indicated reserve expressed as a % of total firm demand	20.0	12.0	17.5	25.8	28.0	49.7	49.4	36.0	25.2	25.9	39.4	...	...	...			

See footnotes at end of table.



TABLE 5. Indicated Reserve(1) - Concluded

P R O V I N C E	Thousands of Kilowatts							F O R E C A S T				PERCENTAGE CHANGE		
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956 1960	1960 1964	1956 1964
<b>Alberta</b>														
1. Gross capability	191	436	562	592	738	771	928	976	1,132	1,203	1,392	65.1	50.0	147.7
2. Total firm demand on the province	179	394	451	476	581	650	715	792	870	955	1,044	58.5	46.0	131.5
3. Indicated reserve (1 - 2)	12	64	111	116	157	121	213	184	262	248	348	...	...	...
4. Indicated reserve expressed as a % of total firm demand	6.7	16.2	24.6	24.4	27.0	18.6	29.8	23.2	13.0	26.0	33.3	...	...	...
<b>British Columbia</b>														
1. Gross capability	951	1,750	2,071	2,350	2,568	2,877	3,028	3,036	3,338	3,439	3,613	46.2	19.3	74.5
2. Total firm demand on the province	829	1,406	1,729	1,825	1,939	1,966	2,126	2,306	2,423	2,593	2,733	23.0	28.6	58.1
3. Indicated reserve (1 - 2)	122	344	342	525	629	911	902	730	915	846	880	...	...	...
4. Indicated reserve expressed as a % of total firm demand	14.7	24.5	19.8	28.8	32.4	46.3	42.4	31.7	37.8	32.6	32.2	...	...	...
<b>Yukon and N.W.T.</b>														
1. Gross capability	21	22	23	26	40	41	55	55	56	57	57	139.1	3.6	147.8
2. Total firm demand on the province	14	19	19	19	30	31	34	39	43	44	45	78.9	32.4	136.8
3. Indicated reserve (1 - 2)	7	3	4	7	10	10	21	16	13	13	12	...	...	...
4. Indicated reserve expressed as a % of total firm demand	50.0	15.8	21.1	36.8	33.3	32.2	61.8	41.0	30.2	29.5	26.7	...	...	...
<b>CANADA</b>														
1. Gross capability	9,384	14,152	15,039	16,469	18,628	20,205	22,340	23,163	24,196	25,553	26,530	48.5	18.8	76.4
2. Total firm demand on Canada	8,706	12,702	13,862	14,816	15,720	16,353	17,430	18,460	19,760	20,882	22,111	25.7	26.9	59.5
3. Indicated reserve (1 - 2)	678	1,450	1,177	1,653	2,908	3,852	4,910	4,703	4,436	4,671	4,419	...	...	...
4. Indicated reserve expressed as a % of total firm demand	7.8	11.4	8.5	11.2	18.5	23.5	28.2	25.5	22.4	22.4	20.0	...	...	...

(1) Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

... Figures not appropriate or not applicable.

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The Policy Sub-Committee serves as an over-all co-ordinating agency for these surveys, the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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Members of the Surveys Sub-Committee serve as area representatives. The function of an area representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey.







DOMINION BUREAU OF STATISTICS  
Public Finance and Transportation Division  
Public Utilities Section

*Eighth*  
ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

1961 Actual  
1962 - 1965 Forecast

*Published by Authority of*  
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August, 1962  
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## TABLE OF CONTENTS

	Page
Introduction .....	5
Review of Survey Results .....	6

### CHARTS

A. Net Generating Capability within Canada .....	8
This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	
B. Net Capability and Firm Demand within Canada .....	9
This chart provides an indication of the reserves available to meet firm demand for electric power within Canada.	
C. Net Generating Capability within Provinces .....	10
This chart illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.	
D. Net Capability and Firm Demand within Provinces .....	12
This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.	
E. Firm Energy Requirement within Canada .....	14
This chart shows the growth in Canadian firm energy requirement during the period 1950-1965.	

### TABLES

1A. <u>Capability and Firm Power Peak Load Requirements</u> .....	15
This table summarizes capability, firm power peak load and indicated reserve for Canada and for each of the provinces.	
1B. <u>Energy Supply and Requirements</u> .....	27
This table summarizes current and historical data on generation, interprovincial receipts and deliveries, secondary energy, and firm energy requirements.	
2. <u>Total Net Generating Capability within Provinces</u> .....	39
This table compares provincial rates of growth in net generating capability.	
3. <u>Firm Power Peak Load within Provinces</u> .....	40
This table compares rates of growth of firm power peak load within provinces.	
4. <u>Firm Energy Requirement within Provinces</u> .....	41
This table compares rates of growth of firm energy requirement within provinces.	
5. <u>Indicated Reserve</u> .....	42
This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	
Glossary of Terms .....	45
Canadian Electrical Association Electric Power Statistics Committee .....	46

### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

.. Figures not available.

... Figures not appropriate or not applicable.

- Nil or zero.

## Introduction

This report presents the results of the Eighth Annual Electric Power Survey of Capability and Load which was conducted in March 1962. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of companies which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001).

There are approximately 150 responding companies in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.3 per cent of all generation, all the imports and exports. The utilities group contributes 79 per cent of the generation to the Canada total.

This year's report is the first incorporating the results obtained by the use of a revised reporting form. As a consequence, several revisions are incorporated into the report and historical figures adjusted where necessary. The revised report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications; any differences are due to late revisions.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns which are forwarded to the Dominion Bureau of Statistics for final revision, editing and compilation. A Co-ordinating Panel composed of members of the Canadian Electrical Association and the Dominion Bureau of Statistics review the results immediately prior to publication. The assistance received from the Canadian Electrical Association and its members has been invaluable in making possible the early release of the survey data.

## Concepts and Definitions

### Table 1A. Capability and Firm Power Peak Load Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. However, more detail has been provided in the generating capability which is now broken down to identify conventional steam, nuclear steam, internal combustion, and gas turbine equipment. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may be equal to, or smaller than, the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plate capacity; the impossibility of placing all pieces of equipment on the line at the same time, low water, ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1A of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sum of the actual peak loads regardless of time of occurrence) and may be equal to, or smaller than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty-six major systems serving the larger population centres in Canada, nine had peak loads on December 18, five on December 19, 12 on other dates between November 30 and December 30, eight outside this period, and two did not report.



Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

#### Table 1B. Energy Supply and Requirements:

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1961, are subdivided by type of generation. No forecasts of generation are given for 1962-65.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts or obligations.

Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

Indicated shortage is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

#### Review of Survey Results

Total net generating capability in 1961 for companies which generate over 10 million kwh. per year increased only 248,000 kw. or 1.1 per cent to 22,628,000 kw.; this is the smallest increase in recent years. The forecast years 1961-1965 indicate a growth of 5,685,000 kw. or a compound growth

rate of 5.76 per cent, as compared with the previous ten-year period 1951-1960, when the growth rate was 9.2 per cent. Thermal capability is expected to grow at the rate of 14.5 per cent per year in the forecast period compared to 17.1 per cent in the previous ten-year period, while hydro-electric capacity is expected to increase at 3.3 per cent per year compared to 8.0 per cent in the previous ten years. Most of the thermal increase will be in steam plants, a small growth in gas turbines, while internal combustion plants will be virtually unchanged.

The first nuclear capability is forecast for 1965, although this may be postponed due to delays in construction or bringing the plant on line because of its pioneering nature. The nuclear capability does not include the 20,000 kw. plant at Rolphton, Ontario which is an experimental plant and not considered part of capability.

The 1961 forecast of generating capability was 367,000 kw. higher than that actually obtained, indicating a delay in completing some plants till the period 1962-1964 and 65,000 kw. thermal capacity out of service at the time of the 1961 survey.

The forecast for 1961 generating capability was approximately realized in all provinces except Ontario, Manitoba and Alberta which were significantly under the forecast and in British Columbia which exceeded the forecast.

The largest absolute growth in generating capability for the forecast years is indicated for Ontario - 2,135,000 kw., Quebec - 1,616,000 kw., British Columbia - 582,000 kw. and Alberta - 451,000 kw. Whereas Quebec will meet most of the increased generating capability by adding over 1,300,000 kw. in hydro capability and 200,000 thermal capability, Ontario plans to increase its capability by adding 1,750,000 thermal, including 200,000 nuclear and only 385,000 hydro; British Columbia plans to add 466,000 thermal and only 110,000 hydro.

The firm power peak loads have not shown the same change in rate of growth as generating capability. In the 1950's the growth rate of firm power peak load in Canada was 7.5 per cent, while the forecast rate of growth is 6.2 per cent.

As a result, the indicated reserve is expected to amount to 4,551,000 kw. in 1962, will decline in 1963 and 1964, and rise to 4,780,000 kw. in 1965, while the indicated reserve is forecast to decline to 15.2 per cent in 1964 and rise in 1965 to 20.3 per cent.

Firm energy requirements increased 2.7 per cent for 1961 to 105,076,000,000 kwh. compared to a growth of 7.3 per cent in the previous 10 year period and a forecast growth rate of 6.6 per cent for the period 1961-1965. All provinces but British Columbia shared in the current increase. The forecast for firm energy requirements made last year was some 2,500 million kwh. higher than what was actually attained. At the same time firm energy requirements were increasing, there was a reduction in the level of net exports (exports-imports) to the United States and lower deliveries of secondary energy. This combined with a long shutdown of the Kitimat Plant of Aluminum Company of Canada Limited in British Columbia, and changed hydraulic conditions in certain parts of the country caused a slight reduction in net generation to 113,271,000,000 kilowatt hours - the first decline since 1947.

CHART-A

## TOTAL GENERATING CAPABILITY WITHIN CANADA

1950-1965

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS

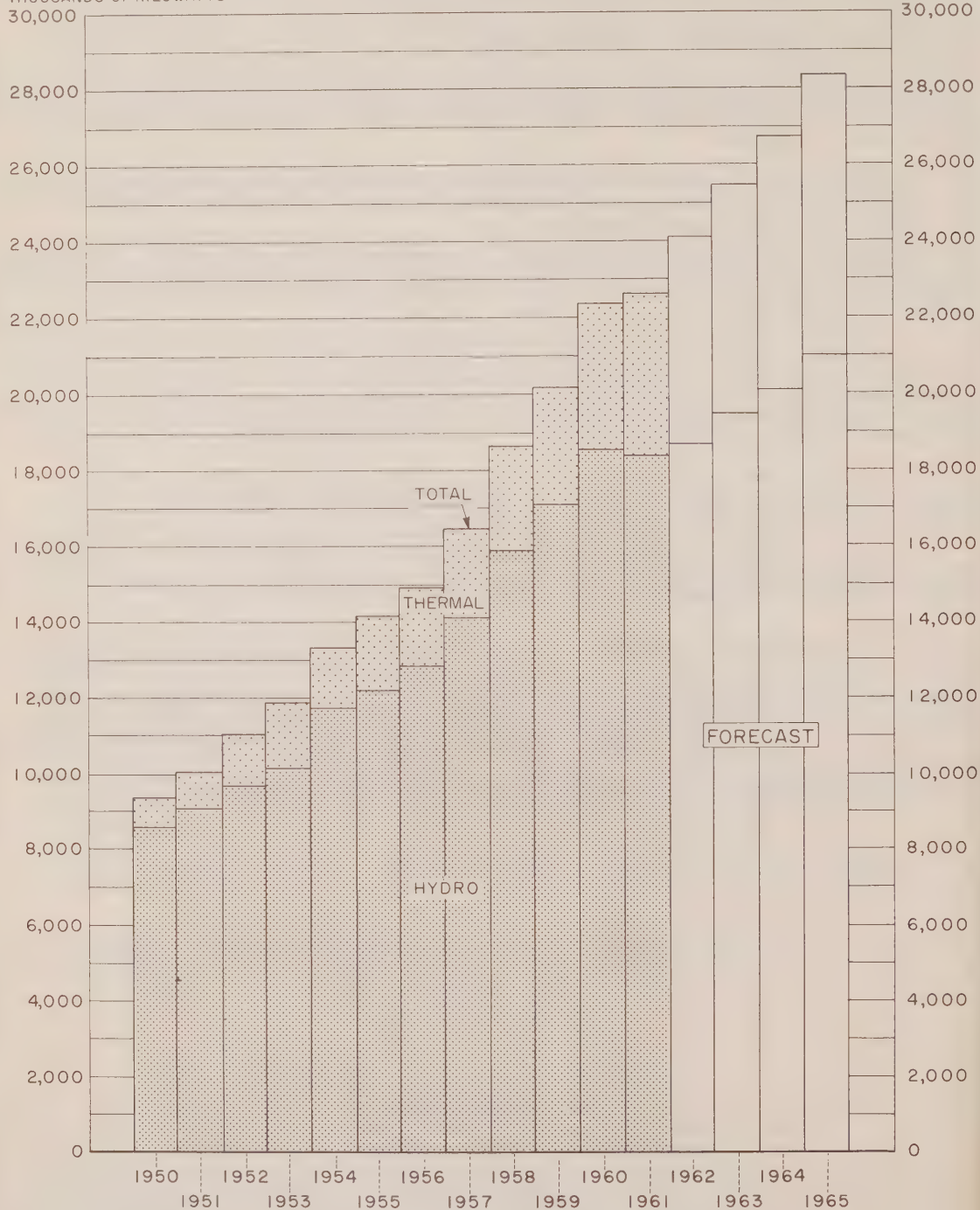


CHART-B

# NET CAPABILITY AND PEAK LOADS WITHIN CANADA

1950 - 1965

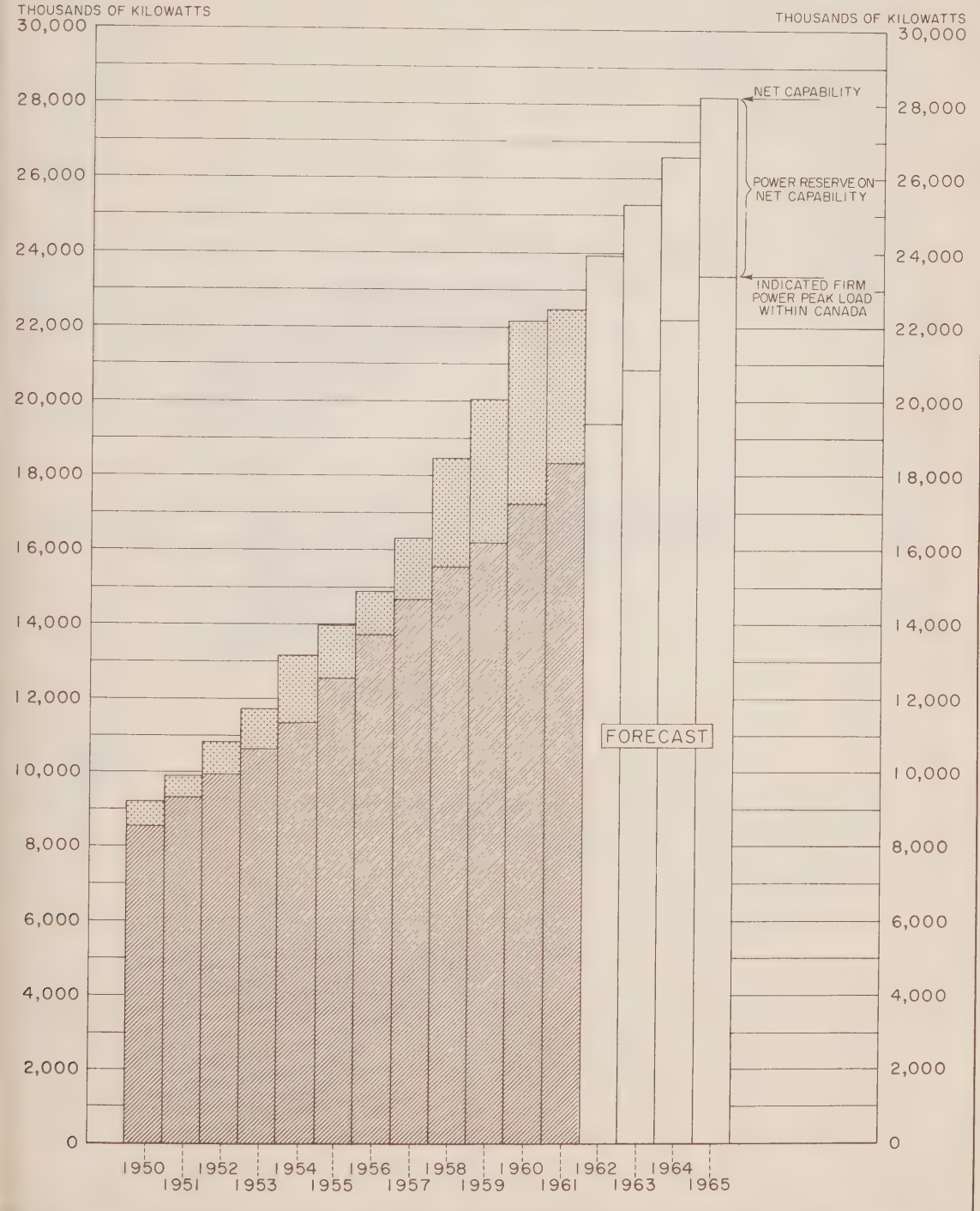
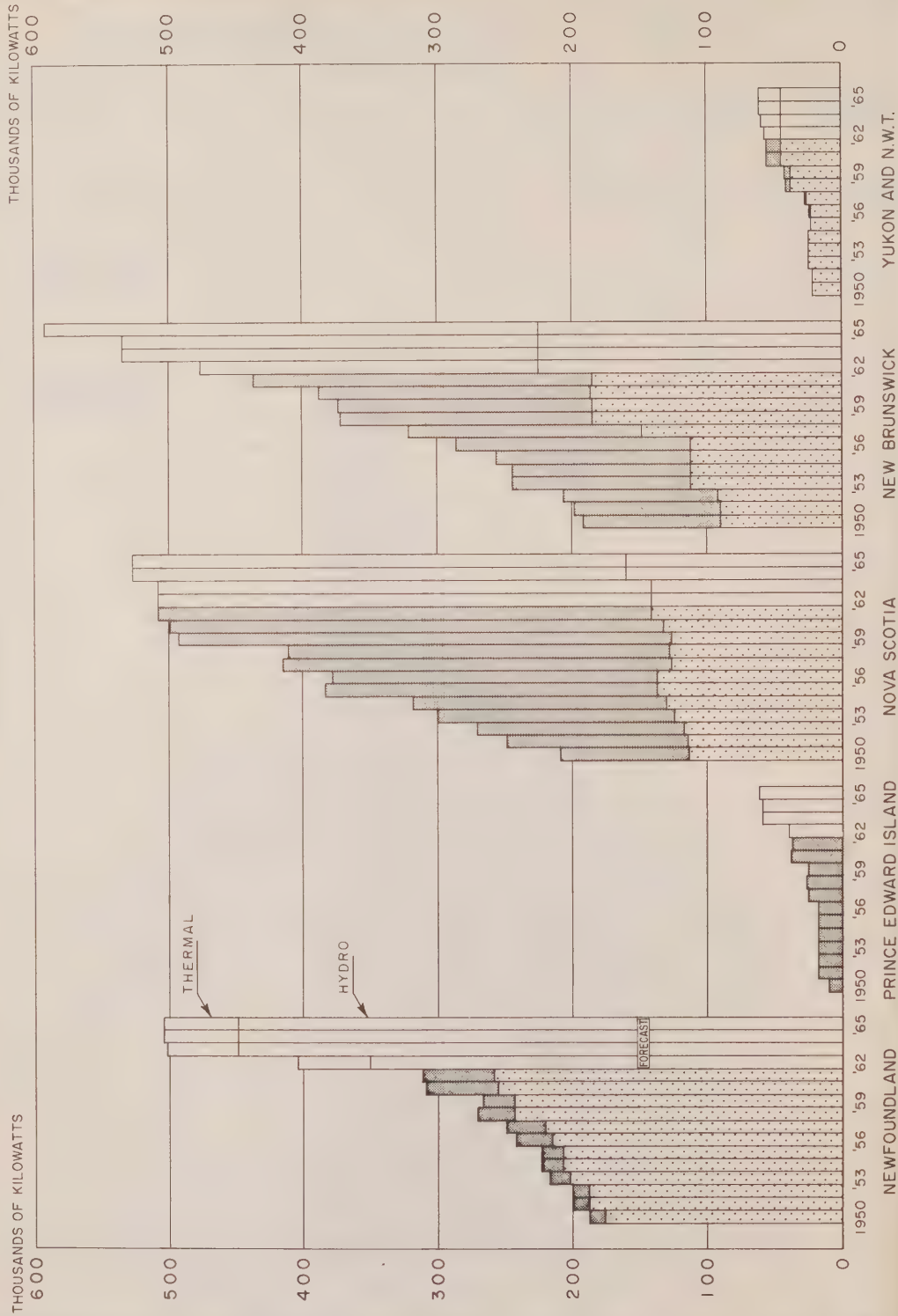




CHART - C

# NET GENERATING CAPABILITY WITHIN PROVINCES

1950 - 1965





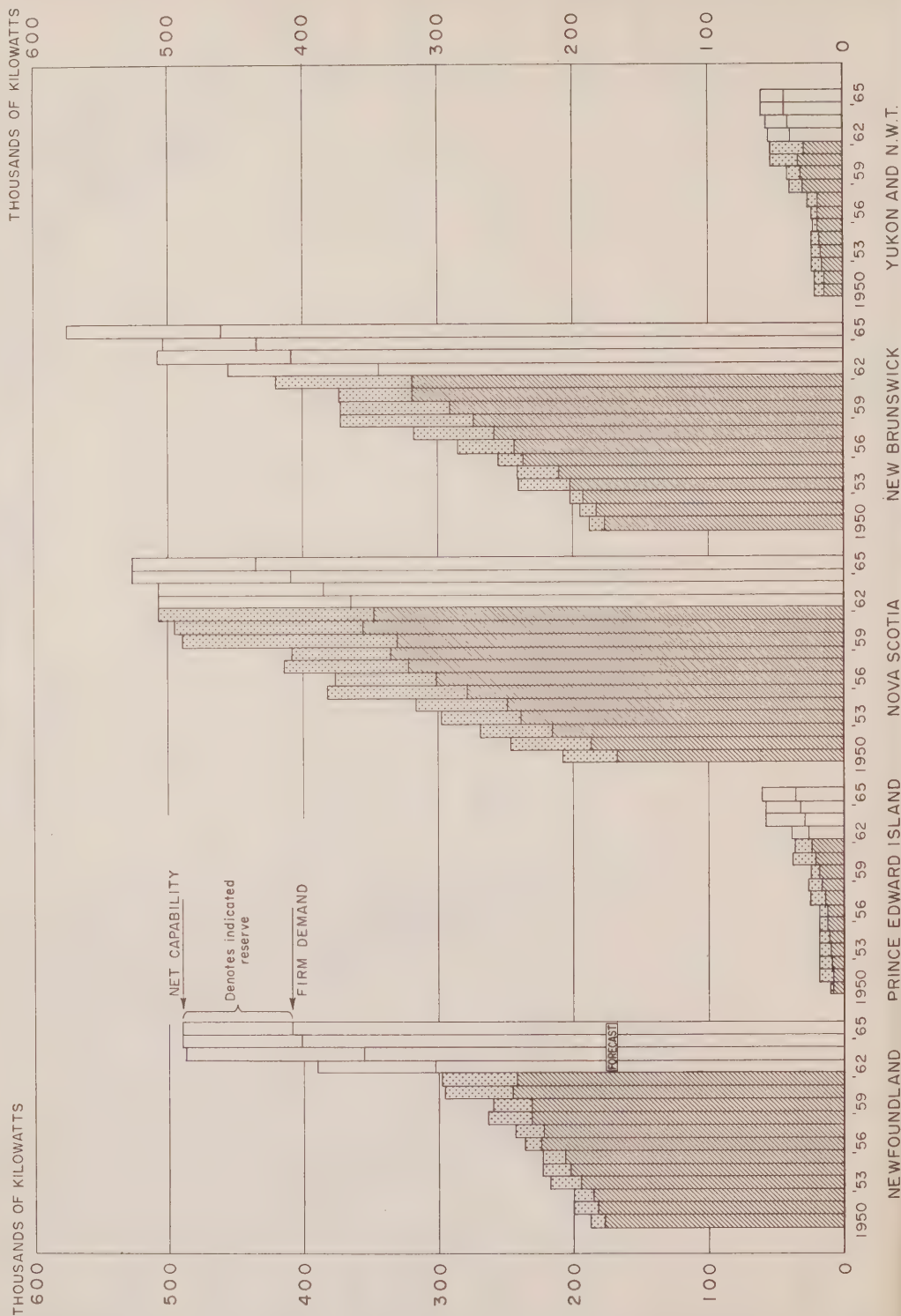
1950-1965



CHART-D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950 - 1965



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1950 - 1965

CHART-D

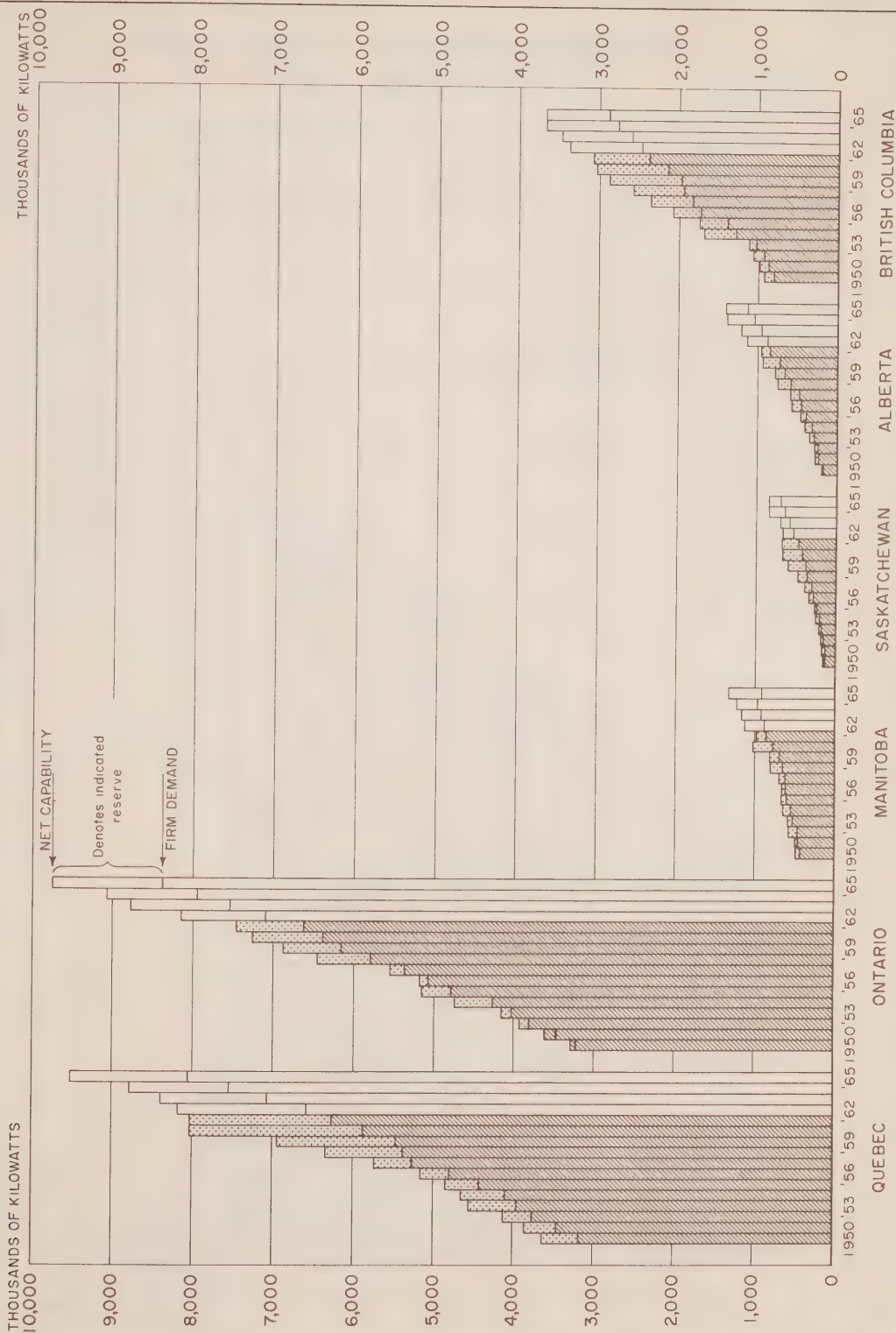


CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1950-1965

BILLIONS OF KILOWATTHOURS

BILLIONS OF KILOWATTHOURS

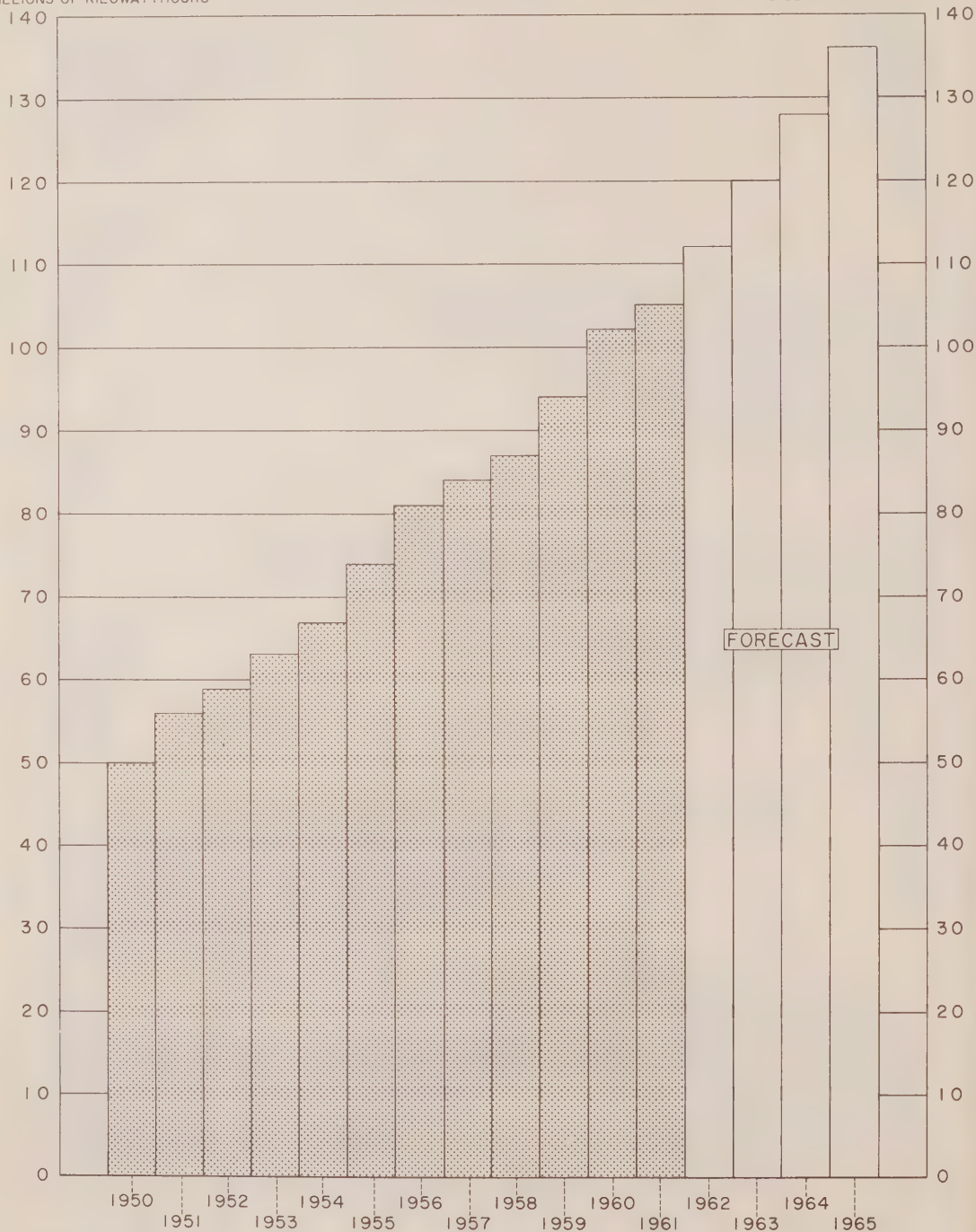




TABLE 1A. Capacity and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	thousands of kilowatts										
<u>Capacity:</u>											
Net generating capacity:											
1. Hydro-electric .....	9,044	12,841	14,143	15,912	17,086	18,516	18,389	18,728	19,526	20,121	21,013
2. Steam - Conventional .....							3,648	4,868	5,292	5,960	6,450
3. Nuclear .....							-	-	-	-	200
4. Internal combustion .....	1,032	2,142	2,326	2,716	3,119	3,824	240	240	243	249	254
5. Gas turbine .....							351	382	384	386	396
6. Total net generating capacity .....	10,076	14,983	16,469	18,628	20,205	22,340	22,628	24,218	25,445	26,716	28,313
Receipts of firm power from:											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States .....	-	56	-	-	-	-	2	2	3	3	3
9. Total receipts .....	-	56	-	-	-	-	2	2	3	3	3
Deliveries of firm power to:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States .....	175	147	150	152	152	166	146	176	131	135	121
12. Total deliveries .....	175	147	150	152	152	166	146	176	131	135	121
13. Total net capacity (6 + 9 - 12) .....	9,901	14,892	16,319	18,476	20,053	22,174	22,484	24,044	25,317	26,584	28,195
<u>Peak loads:</u>											
14. Firm power peak load within Canada .....	8,989	13,668	14,664	15,568	16,201	17,264	18,353	19,493	20,871	22,188	23,415
15. Indicated shortages .....	321	47	2	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within Canada (14 + 15) .....	9,310	13,715	14,666	15,568	16,201	17,264	18,353	19,493	20,871	22,188	23,415
17. Firm power peak load on Canada (12 + 16) ..	9,485	13,862	14,816	15,720	16,353	17,430	18,499	19,669	21,002	22,323	23,556
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	591	1,177	1,653	2,908	3,852	4,910	4,131	4,551	4,446	4,396	4,780



TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	188	215	220	243	243	255	258	350	448	448	448
2. Steam - Conventional .....							40	40	40	40	40
3. Nuclear .....	12	27	29	28	24	54	-	-	-	-	-
4. Internal combustion .....							13	14	14	16	16
5. Gas turbine .....							-	-	-	-	-
6. Total net generating capability .....	200	242	249	271	267	309	311	404	502	504	504
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	-	6	6	8	7	14	13	14	14	14	14
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	6	6	8	7	14	13	14	14	14	14
13. Total net capability (6 + 9 - 12) .....	200	236	243	263	260	295	298	390	488	490	490
Peak loads:											
14. Firm power peak load within province .....	182	222	222	231	231	245	242	302	355	401	409
15. Indicated shortages .....	-	2	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	182	224	222	231	231	245	242	302	355	401	409
17. Firm power peak load on province (12 + 16) .....	182	230	228	239	238	259	255	316	369	415	423
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	18	12	21	32	29	50	56	88	133	89	81

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	-	-	-	-	-	-	-	-	-	-	-
2. Steam - Conventional .....	-	-	-	-	-	-	32	32	52	52	52
3. Nuclear .....	-	-	-	-	-	-	-	-	-	-	-
4. Internal combustion .....	18	18	25	26	25	38	-	-	-	-	-
5. Gas turbine .....	-	-	-	-	-	-	5	7	7	7	9
6. Total net generating capacity .....	18	18	25	26	25	38	37	39	59	59	61
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	18	18	25	26	25	38	37	39	59	59	61
<u>Peak loads:</u>											
14. Firm power peak load within province .....	8	12	14	16	19	21	24	26	29	32	36
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	8	12	14	16	19	21	24	26	29	32	36
17. Firm power peak load on province (12 + 16) .....	8	12	14	16	19	21	24	26	29	32	36
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	10	6	11	10	6	17	13	13	30	27	25

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	114	136	126	127	126	132	141	141	141	160	160
2. Steam - Conventional .....							365	365	365	365	365
3. Nuclear .....							-	-	-	-	-
4. Internal combustion .....	134	242	289	284	367	367	2	2	2	2	2
5. Gas turbine .....							-	-	-	-	-
6. Total net generating capability .....	248	378	415	411	493	499	508	508	508	527	527
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	2	2	2	3	3	3	1	1	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	2	2	2	3	3	3	1	1	-	-	-
13. Total net capability (6 + 9 - 12) .....	246	376	413	408	490	496	507	507	507	527	527
<u>Peak loads:</u>											
14. Firm power peak load within province .....	185	301	322	335	330	356	347	365	386	409	435
15. Indicated shortages .....	2	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	187	301	322	335	330	356	347	365	386	409	435
17. Firm power peak load on province (12 + 16) .....	189	303	324	338	333	359	348	366	386	409	435
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	59	75	91	73	160	140	160	142	122	118	92

TABLE 1A. Capacity and Firm Power Peak Load Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
thousands of kilowatts											
<u>Capacity:</u>											
Net generating capacity:											
1. Hydro-electric .....	90	112	148	185	185	186	185	225	225	225	225
2. Steam - Conventional .....							243	243	301	301	339
3. Nuclear .....							-	-	-	-	-
4. Internal combustion .....	108	174	173	187	188	202	8	8	8	8	8
5. Gas turbine .....							-	-	-	-	-
6. Total net generating capacity .....	198	286	321	372	373	388	436	476	534	534	592
Receipts of firm power from:											
7. Other provinces .....	2	5	5	8	7	7	6	6	7	7	7
8. United States .....	-	-	-	-	-	-	-	-	1	1	1
9. Total receipts .....	2	5	5	8	7	7	6	6	8	8	8
Deliveries of firm power to:											
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
11. United States .....	4	5	8	9	9	23	22	28	35	39	25
12. Total deliveries .....	4	5	8	9	9	23	22	28	35	39	25
13. Total net capacity (6 + 9 - 12) .....	196	286	318	371	371	372	420	454	507	503	575
<u>Peak loads:</u>											
14. Firm power peak load within province .....	184	243	258	273	291	319	319	343	408	434	460
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	184	243	258	273	291	319	319	343	408	434	460
17. Firm power peak load on province (12 + 16) .....	188	248	266	282	300	342	341	371	443	473	485
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	12	43	60	98	80	53	101	111	99	69	115

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
thousands of kilowatts											
<b>Capability:</b>											
Net generating capability:											
1. Hydro-electric .....	4,609	5,854	6,406	6,992	7,612	8,658	8,628	8,803	9,028	9,263	9,939
2. Steam - Conventional .....							59	59	59	214	364
3. Nuclear .....							-	-	-	-	-
4. Internal combustion .....	26	36	55	61	69	106	15	15	15	15	15
5. Gas turbine .....							36	36	36	36	36
6. Total net generating capability .....	4,635	5,890	6,461	7,053	7,681	8,764	8,738	8,913	9,138	9,528	10,354
<b>Receipts of firm power from:</b>											
7. Other provinces .....	1	7	7	9	9	16	19	19	17	16	16
8. United States .....	-	4	-	-	-	-	2	2	2	2	2
9. Total receipts .....	1	11	7	9	9	16	21	21	19	18	18
<b>Deliveries of firm power to:</b>											
10. Other provinces .....	735	691	694	673	696	698	696	699	702	703	795
11. United States .....	56	56	56	57	57	57	38	59	60	60	60
12. Total deliveries .....	791	747	750	730	753	755	734	758	762	763	855
13. Total net capability (6 + 9 - 12) .....	3,845	5,154	5,718	6,332	6,937	8,025	8,025	8,176	8,395	8,783	9,517
<b>Peak loads:</b>											
14. Firm power peak load within province .....	3,462	4,749	5,256	5,375	5,466	5,871	6,258	6,578	7,063	7,530	8,050
15. Indicated shortages .....	-	44	2	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	3,462	4,793	5,258	5,375	5,466	5,871	6,258	6,578	7,063	7,530	8,050
17. Firm power peak load on province (12 + 16) .....	4,253	5,540	6,008	6,105	6,219	6,626	6,992	7,336	7,825	8,293	8,905
<b>Indicated reserve:</b>											
18. Indicated reserve (13 - 16) .....	383	361	460	957	1,471	2,154	1,767	1,598	1,332	1,253	1,467



TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	2,476	3,778	4,145	5,081	5,467	5,464	5,292	5,306	5,557	5,572	5,682
2. Steam - Conventional .....							1,555	2,212	2,538	2,820	3,102
3. Nuclear .....							-	-	-	-	200
4. Internal combustion .....	348	787	787	800	808	1,186	11	11	7	7	9
5. Gas turbine .....							-	-	-	-	-
6. Total net generating capability .....	2,824	4,565	4,932	5,881	6,275	6,650	6,858	7,529	8,102	8,399	8,993
Receipts of firm power from:											
7. Other provinces .....	744	702	705	668	692	694	695	696	698	700	792
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	744	702	705	668	692	694	695	696	698	700	792
Deliveries of firm power to:											
10. Other provinces .....	1	1	1	1	2	2	5	5	6	6	6
11. United States .....	85	86	86	86	86	86	86	89	36	36	36
12. Total deliveries .....	86	87	87	87	88	88	91	94	42	42	42
13. Total net capability (6 + 9 - 12) .....	3,482	5,180	5,550	6,462	6,879	7,256	7,462	8,131	8,758	9,057	9,743
<u>Peak loads:</u>											
14. Firm power peak load within province .....	3,292	5,064	5,369	5,794	6,154	6,391	6,615	7,091	7,535	7,951	8,380
15. Indicated shortages .....	319	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	3,611	5,064	5,369	5,794	6,154	6,391	6,615	7,091	7,535	7,951	8,380
17. Firm power peak load on province (12 + 16) .....	3,697	5,151	5,456	5,881	6,242	6,479	6,706	7,185	7,577	7,993	8,422
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	- 129	116	181	668	725	865	847	1,040	1,223	1,106	1,363

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	413	556	561	566	566	701	735	735	735	840	945
2. Steam - Conventional .....							166	294	294	294	294
3. Nuclear .....	10	46	78	168	168	231	-	-	-	-	-
4. Internal combustion .....							4	4	4	4	4
5. Gas turbine .....							-	-	-	-	-
6. Total net generating capability .....	423	602	639	734	734	932	905	1,033	1,033	1,138	1,243
Receipts of firm power from:											
7. Other provinces .....	77	64	69	68	72	86	83	88	138	88	88
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	77	64	69	68	72	86	83	88	138	88	88
Deliveries of firm power to:											
10. Other provinces .....	9	14	14	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	9	14	14	-	-	-	-	-	-	-	-
13. Total net capability .....	491	652	694	802	806	1,018	988	1,121	1,171	1,226	1,331
<u>Peak loads:</u>											
14. Firm power peak load within province .....	454	605	608	646	690	772	849	889	929	969	915
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	454	605	608	646	690	772	849	889	929	969	915
17. Firm power peak load on province (12 + 16) .....	463	619	622	646	690	772	849	889	929	969	915
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	37	47	86	156	116	246	139	232	242	257	416

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	85	82	87	87	88	99	107	110	244	311	311
2. Steam - Conventional .....							572	572	517	539	539
3. Nuclear .....	160	320	376	451	583	653	-	-	-	-	-
4. Internal combustion .....							35	29	29	29	29
5. Gas turbine .....							43	43	43	43	43
6. Total net generating capability .....	245	402	463	538	671	752	757	754	833	922	922
Receipts of firm power from:											
7. Other provinces .....	-	-	-	1	1	1	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	1	1	1	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	77	64	69	68	72	86	88	88	138	88	88
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	77	64	69	68	72	86	88	88	138	88	88
13. Total net capability (6 + 9 - 12) .....	168	338	394	471	600	667	669	666	695	834	834
<u>Peak loads:</u>											
14. Firm power peak load within province .....	127	278	299	353	377	418	466	528	578	634	691
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	127	278	299	353	377	418	466	528	578	634	691
17. Firm power peak load on province (12 + 16) .....	204	342	368	421	449	504	554	616	716	722	779
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	41	60	95	118	223	249	203	138	117	200	143

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	162	220	238	238	238	318	327	327	327	477	477
2. Steam - Conventional .....							498	648	719	751	751
3. Nuclear .....	109	338	350	496	530	607	-	-	-	-	-
4. Internal combustion .....							28	32	33	35	36
5. Gas turbine .....							100	130	130	130	140
6. Total net generating capability .....	271	558	588	734	768	925	953	1,137	1,209	1,393	1,404
Receipts of firm power from:											
7. Other provinces .....	-	4	4	4	3	3	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	4	4	4	3	3	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	5	-	-	1	1	1	5	5	6	7	7
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	5	-	-	1	1	1	5	5	6	7	7
13. Total net capability (6 + 9 - 12) .....	266	562	592	737	770	927	948	1,132	1,203	1,386	1,397
<u>Peak loads:</u>											
14. Firm power peak load within province .....	220	451	476	580	649	714	836	876	951	1,033	1,127
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	220	451	476	580	649	714	836	876	951	1,033	1,127
17. Firm power peak load on province (12 + 16) .....	225	451	476	581	650	715	841	881	957	1,040	1,134
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	46	111	116	157	121	213	112	256	252	353	270

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Actual							Forecast			
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	908	1,866	2,187	2,356	2,524	2,659	2,672	2,687	2,777	2,781	2,782
2. Steam - Conventional .....							117	402	406	583	583
3. Nuclear .....							-	-	-	-	-
4. Internal combustion .....	107	153	163	212	353	369	109	107	112	114	114
5. Gas turbine .....							172	173	173	173	173
6. Total net generating capability .....	1,015	2,019	2,350	2,568	2,877	3,028	3,070	3,369	3,468	3,651	3,652
Receipts of firm power from:											
7. Other provinces .....	5	-	-	-	-	-	5	5	6	7	7
8. United States .....	-	52	-	-	-	-	-	-	-	-	-
9. Total receipts .....	5	52	-	-	-	-	5	5	6	7	7
Deliveries of firm power to:											
10. Other provinces .....	-	4	4	4	3	3	-	-	-	-	-
11. United States .....	30	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	30	4	4	4	3	3	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	990	2,067	2,346	2,564	2,874	3,025	3,075	3,374	3,474	3,658	3,659
Peak loads:											
14. Firm power peak load within province .....	861	1,724	1,821	1,935	1,963	2,123	2,368	2,455	2,595	2,751	2,868
15. Indicated shortages .....	-	1	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	861	1,725	1,821	1,935	1,963	2,123	2,368	2,455	2,595	2,751	2,868
17. Firm power peak load on province (12 + 16) .....	891	1,729	1,825	1,939	1,966	2,126	2,368	2,455	2,595	2,751	2,868
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	129	342	525	629	911	902	707	919	879	907	791



TABLE 1A. Capability and Firm Power Peak Load Requirements - Concluded

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	21	22	25	37	37	44	44	44	44	44	44
2. Steam - Conventional .....							1	1	1	1	1
3. Nuclear .....	-	1	1	3	4	11	-	-	-	-	-
4. Internal combustion .....							10	11	12	12	12
5. Gas turbine .....							-	-	2	4	4
6. Total net generating capacity .....	21	23	26	40	41	55	55	56	59	61	61
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-	-
13. Total net capacity .....	21	23	26	40	41	55	55	56	59	61	61
Peak loads:											
14. Firm power peak load within province .....	14	19	19	30	31	34	29	40	42	44	44
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	14	19	19	30	31	34	29	40	42	44	44
17. Firm power peak load on province (12 + 16) .....	14	19	19	30	31	34	29	40	42	44	44
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	7	4	7	10	10	21	26	16	17	17	17

TABLE 1B. Energy Supply and Requirements

- 27 -

	Actual							Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
Net generation by:												
millions of kilowatt-hours												
1. Hydro-electric .....	..	..	82,973	90,250	96,517	105,770	103,692	...	...	...	...	
2. Steam - Conventional .....							8,822	...	...	...	...	
3. Nuclear .....							-	...	...	...	...	
4. Internal combustion .....	..	..	7,288	6,507	7,339	8,271	509	...	...	...	...	
5. Gas turbine .....							248	...	...	...	...	
6. Total net generation .....	..	87,427	90,261	96,757	103,856	114,041	113,271	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...	
8. United States .....	..	...	..	..	..	..	8	...	8	9	9	
(b) Secondary:												
9. Other provinces .....	..	...	...	...	...	...	...	...	...	...	...	
10. United States .....	..	...	..	..	..	..	1,392	...	...	...	...	
11. Total receipts of energy .....	..	227	831	244	515	367	1,400	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
12. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...	
13. United States .....	1,418	1,226	1,172	1,264	1,253	1,283	1,122	1,290	1,066	1,027	974	
(b) Secondary:												
14. Other provinces .....	...	3,885	3,613	2,883	3,331	4,228	3,058	...	...	...	...	
15. United States .....	..	...	...	...	...	...	...	...	...	...	...	
16. Total deliveries of energy .....	..	5,111	4,785	4,147	4,584	5,511	4,180	...	...	...	...	
17. Total energy available (6 + 11 - 16) ..	..	82,543	86,307	92,854	99,787	108,897	110,491	...	...	...	...	
18. Secondary energy delivered within Canada .....												
19. Firm energy available within Canada (17 - 18) ..	55,516	79,543	83,767	87,239	94,103	102,282	105,076	112,168	120,470	128,031	135,851	
20. Indicated shortage .....	312	1,546	554	-	-	-	-	-	-	-	-	
21. Firm energy requirement within Canada (19 + 20)	55,828	81,089	84,321	87,239	94,103	102,282	105,076	112,168	120,470	128,031	135,851	
22. Firm energy requirement on Canada (12 + 13 + 21)	57,246	82,315	85,493	88,503	95,356	103,565	106,198	113,458	121,536	129,058	136,825	

TABLE 1B. Energy Supply and Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net generation by:											
	millions of kilowatt-hours										
1. Hydro-electric .....	..	..	1,305	1,330	1,320	1,403	1,322	...	...	...	...
2. Steam - Conventional .....							116	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	50	40	54	76	10	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	1,355	1,355	1,370	1,374	1,479	1,448	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	-	-	-	-	-
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	-	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...
11. Total receipts of energy .....	..	-	-	9	-	-	-	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	31	46	44	33	49	80	83	83	83	83
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	-	..	2	18	36	3	...	...	...	...
15. United States .....	..	-	..	..	..	..	-	...	...	...	...
16. Total deliveries of energy .....	..	31	46	46	51	85	83	...	...	...	...
17. Total energy available (6 + 11 - 16) .....	..	1,324	1,309	1,333	1,323	1,394	1,365	...	...	...	...
18. Secondary energy delivered within province .....	..	98	119	155	108	74	4	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,040	1,226	1,190	1,178	1,215	1,320	1,361	1,679	2,099	2,338	2,534
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	1,040	1,226	1,190	1,178	1,215	1,320	1,361	1,679	2,099	2,338	2,534
22. Firm energy requirement on province (12 + 13 + 21)	1,040	1,257	1,236	1,222	1,248	1,369	1,441	1,762	2,182	2,421	2,617

TABLE 1B. Energy Supply and Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net generation by:											
millions of kilowatt-hours											
1. Hydro-electric .....	..	..	-	-	-	-	-	...	...	...	...
2. Steam - Conventional .....							81	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	57	63	71	79	7	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	53	57	63	71	79	88	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	-	-	-	-	-	-	-	-	-
8. United States .....	..	..	-	-	-	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	-	-	-	-	-	...	...	...	...
10. United States .....	..	..	-	-	-	-	-	...	...	...	...
11. Total receipts of energy .....	..	-	-	-	-	-	-	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	-	-	-	-	-	-	-	...	...	...	...
15. United States .....	-	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	-	-	-	-	-	-	-	...	...	...	...
17. Total energy requirement (6 + 11 - 16) ..	..	53	57	63	71	79	88	...	...	...	...
18. Secondary energy delivered within province .....	-	-	-	-	-	-	-	...	...	...	...
19. Firm energy available within province (17 - 18) ..	34	53	57	63	71	79	88	102	110	123	134
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	34	53	57	63	71	79	88	102	110	123	134
22. Firm energy requirement on province (12 + 13 + 21)	34	53	57	63	71	79	88	102	110	123	134

TABLE 1B. Energy Supply and Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net generation by:											
	millions of kilowatt-hours										
1. Hydro-electric .....	..	..	514	651	674	632	549	...	...	...	...
2. Steam - Conventional .....								...	...	...	...
3. Nuclear .....							1,301	...	...	...	...
4. Internal combustion .....	..	..	966	911	966	1,162	-	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	1,465	1,480	1,562	1,640	1,794	1,850	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	16	-	-	-	-
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	-	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...
11. Total receipts of energy .....	..	-	..	..	..	..	16	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	8	9	10	14	80	12	6	6	6	6
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	-	-	-	-	-	-	79	...	...	...	...
15. United States .....	-	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	-	8	9	10	14	80	91	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	1,457	1,471	1,552	1,626	1,714	1,775	...	...	...	...
18. Secondary energy delivered within province .....	..	-	-	-	-	-	-	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,027	1,457	1,471	1,552	1,626	1,714	1,775	1,832	1,942	2,059	2,183
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	1,027	1,457	1,471	1,552	1,626	1,714	1,775	1,832	1,942	2,059	2,183
22. Firm energy requirement on province (12 + 13 + 21)	1,033	1,465	1,480	1,562	1,640	1,794	1,787	1,838	1,948	2,065	2,189



TABLE 1B. Energy Supply and Requirements - Continued

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	..	606	1,066	975	887	994	...	...	...	...
2. Steam - Conventional .....							870	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	755	478	692	842	18	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	1,251	1,361	1,544	1,667	1,729	1,882	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	31	27	28	30	32
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	79	...	...	...	...
10. United States .....	..	..	..	..	..	..	14	...	...	...	...
11. Total receipts of energy .....	..	21	28	26	32	111	124	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	..	..	..	..	..	..	..	152	185	214	160
13. United States .....	41	32	29	63	51	58	125	...	...	...	...
(b) Secondary:											
14. Other provinces .....	..	..	..	..	..	..	16	...	...	...	...
15. United States .....	..	..	12	88	109	107	78	...	...	...	...
16. Total deliveries of energy .....	..	32	41	151	160	165	219	...	...	...	...
17. Total energy available (6 + 11 - 16) .....	..	1,240	1,348	1,419	1,539	1,675	1,787	...	...	...	...
18. Secondary energy delivered within province .....	..	4	1	2	2	1	5	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,002	1,236	1,347	1,417	1,537	1,674	1,782	1,925	2,201	2,441	2,590
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	1,002	1,236	1,347	1,417	1,537	1,674	1,782	1,925	2,201	2,441	2,590
22. Firm energy requirement on province (12 + 13 + 21)	1,043	1,268	1,376	1,480	1,588	1,732	1,907	2,077	2,386	2,655	2,750

TABLE 1B. Energy Supply and Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	..	37,802	43,340	44,418	50,000	49,432	...	...	...	...
2. Steam - Conventional .....							276	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	185	189	209	273	7	...	...	...	...
5. Gas turbine .....							11	...	...	...	...
6. Total net generation .....	..	37,660	37,987	43,529	44,627	50,273	49,726	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	87	90	90	90	90
8. United States .....	..	..	..	..	..	..	7	7	8	8	8
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	16	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...
11. Total receipts of energy .....	..	45	65	61	83	103	110	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	4,456	4,117	4,075	4,205	4,211	4,193	4,207	4,248	4,254	4,275	4,273
13. United States .....	490	491	485	490	492	496	353	494	505	505	506
(b) Secondary:											
14. Other provinces .....	..	394	876	1,785	1,415	1,723	1,649	...	...	...	...
15. United States .....	..	184	64	36	54	62	54	...	...	...	...
16. Total deliveries of energy .....	..	5,186	5,500	6,516	6,172	6,474	6,263	...	...	...	...
17. Total energy available (6 + 11 - 16) .....	..	32,519	32,552	37,074	38,538	43,902	43,573	...	...	...	...
18. Secondary energy delivered within province .....											
19. Firm energy available within province (17 - 18) ..	..	2,277	1,716	4,732	4,503	5,350	4,551	...	...	...	...
20. Indicated shortage .....	23,189	30,242	30,836	32,342	34,035	38,552	39,022	39,884	43,230	45,925	49,176
21. Firm energy requirement within province (19 + 20)	215	1,546	540	-	-	-	-	-	-	-	-
22. Firm energy requirement on province (12 + 13 + 21)	23,404	31,788	31,376	32,342	34,035	38,552	39,022	39,884	43,230	45,925	49,176
	28,350	36,396	35,936	37,037	38,738	43,241	43,582	44,626	47,989	50,705	53,955

TABLE 1B. Energy Supply and Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net generation by:											
	millions of kilowatt-hours										
1. Hydro-electric .....	..	..	27,894	27,942	32,301	34,870	33,654	...	...	...	...
2. Steam - Conventional .....							1,187	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	2,089	1,197	946	822	31	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	28,783	29,983	29,139	33,247	35,692	34,872	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	4,188	4,227	4,232	4,251	4,247
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	1,649	...	...	...	...
10. United States .....	..	..	..	..	..	..	1,362	...	...	...	...
11. Total receipts of energy .....	..	4,805	5,375	6,232	6,094	6,182	7,199	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	3	4	4	5	5	6	7	7	7	7	7
13. United States .....	703	703	658	711	710	727	642	644	376	308	308
(b) Secondary:											
14. Other provinces .....	..	11	18	46	83	131	275	...	...	...	...
15. United States .....	..	3,681	3,524	2,746	3,154	4,043	2,909	...	...	...	...
16. Total deliveries of energy .....	..	4,399	4,204	3,508	3,952	4,907	3,833	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	29,189	31,154	31,863	35,389	36,967	38,238	...	...	...	...
18. Secondary energy delivered within province .....											
19. Firm energy available within province (17 - 18) ..	20,395	29,069	30,960	31,468	34,904	36,382	37,727	40,634	43,255	45,763	48,105
20. Indicated shortage .....	97	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	20,492	29,069	30,960	31,468	34,904	36,382	37,727	40,634	43,255	45,763	48,105
22. Firm energy requirement on province (12 + 13 + 21)	21,198	29,776	31,622	32,184	35,619	37,115	38,376	41,285	43,638	46,078	48,420

TABLE 1B. Energy Supply and Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net generation by:											
	millions of kilowatt-hours										
1. Hydro-electric .....	..	..	3,333	3,082	3,582	3,735	3,591	...	...	...	...
2. Steam - Conventional .....							238	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	5	131	51	75	11	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	3,331	3,338	3,213	3,633	3,810	3,840	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	623	611	643	616	616
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	301	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...
11. Total receipts of energy .....	..	555	571	620	652	739	924	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	79	94	136	-	-	-	2	-	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	38	18	43	3	4	4	...	...	...	...
15. United States .....	..	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	..	132	154	43	3	4	6	...	...	...	...
17. Total energy available (6 + 11 - 16) .....	..	3,754	3,755	3,790	4,282	4,545	4,758	...	...	...	...
18. Secondary energy delivered within province .....	..	496	408	214	393	344	60	...	...	...	...
19. Firm energy available within province (17 - 18) ..	2,443	3,258	3,347	3,576	3,889	4,201	4,698	5,023	5,266	5,499	5,762
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	2,443	3,258	3,347	3,576	3,889	4,201	4,698	5,023	5,266	5,499	5,762
22. Firm energy requirement on province (12 + 13 + 21)	2,522	3,352	3,483	3,576	3,889	4,201	4,700	5,023	5,266	5,499	5,762

TABLE 1B. Energy Supply and Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	..	546	569	586	620	658	...	...	...	...
2. Steam - Conventional .....								...	...	...	...
3. Nuclear .....							1,682	...	...	...	...
4. Internal combustion .....	..	..	1,147	1,333	1,498	1,659	109	...	...	...	...
5. Gas turbine .....							62	...	...	...	...
6. Total net generation .....	..	1,569	1,693	1,902	2,084	2,279	2,511	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	-	-	-	-	-
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	6	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...
11. Total receipts of energy .....	..	-	3	3	8	6	6	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	515	554	503	504	517	575	621	611	643	616	616
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	-	67	79	78	44	41	...	...	...	...
15. United States .....	..	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	..	554	570	583	595	619	662	...	...	...	...
17. Total energy available (6 + 11 - 16) ..	..	1,015	1,126	1,322	1,497	1,666	1,855	...	...	...	...
18. Secondary energy delivered within province .....	..	-	-	-	-	-	-	...	...	...	...
19. Firm energy available within province (17 - 18) ..	467	1,015	1,126	1,322	1,497	1,666	1,855	2,149	2,356	2,657	2,889
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	467	1,015	1,126	1,322	1,497	1,666	1,855	2,149	2,356	2,657	2,889
22. Firm energy requirement on province (12 + 13 + 21)	982	1,569	1,629	1,826	2,014	2,241	2,476	2,760	2,999	3,273	3,505



TABLE 1B. Energy Supply and Requirements - Continued

	Actual							Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
Net generation by:												
	millions of kilowatt-hours											
1. Hydro-electric .....	..	..	807	991	842	887	1,023	...	...	...	...	...
2. Steam - Conventional .....							2,534	...	...	...	...	...
3. Nuclear .....							-	...	...	...	...	...
4. Internal combustion .....	..	..	1,533	1,616	2,228	2,540	51	...	...	...	...	...
5. Gas turbine .....							165	...	...	...	...	...
6. Total net generation .....	..	2,076	2,340	2,607	3,070	3,427	3,773	...	...	...	...	...
Receipts of energy from:												
(a) Firm:												
7. Other provinces .....	..	..	..	..	..	..	6	10	12	13	13	13
8. United States .....	..	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:												
9. Other provinces .....	..	..	..	..	..	..	30	...	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...	...
11. Total receipts of energy .....	..	29	22	19	34	30	36	...	...	...	...	...
Deliveries of energy to:												
(a) Firm:												
12. Other provinces .....	20	-	-	-	5	3	1	2	2	2	2	2
13. United States .....	-	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:												
14. Other provinces .....	..	-	4	2	2	2	-	...	...	...	...	...
15. United States .....	..	-	-	-	-	-	-	...	...	...	...	...
16. Total deliveries of energy .....	..	-	4	2	7	5	1	...	...	...	...	...
17. Total energy available (6 + 11 - 16) .....	..	2,105	2,358	2,624	3,097	3,452	3,808	...	...	...	...	...
18. Secondary energy delivered within province .....	..	-	-	-	-	-	-	...	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,114	2,105	2,358	2,624	3,097	3,452	3,808	4,062	4,383	4,722	5,096	5,096
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20) ..	1,114	2,105	2,358	2,624	3,097	3,452	3,808	4,062	4,383	4,722	5,096	5,096
22. Firm energy requirement on province (12 + 13 + 21) ..	1,134	2,105	2,358	2,624	3,102	3,455	3,809	4,064	4,385	4,724	5,098	5,098

TABLE 1B. Energy Supply and Requirements - Continued

	Actual						Forecast				
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net generation by:											
	millions of kilowatt-hours										
1. Hydro-electric .....	..	..	10,054	11,148	11,673	12,584	12,295	...	...	...	...
2. Steam - Conventional .....							535	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	487	534	603	729	246	...	...	...	...
5. Gas turbine .....							10	...	...	...	...
6. Total net generation .....	..	9,774	10,541	11,682	12,276	13,313	13,086	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	1	2	2	2	2
8. United States .....	..	..	..	..	..	..	1	1	1	1	1
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	-	...	...	...	...
10. United States .....	..	..	..	..	..	..	16	...	...	...	...
11. Total receipts of energy .....	..	52	545	18	30	72	18	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	10	9	6	6	3	6	10	12	13	13
13. United States .....	184	-	-	-	-	2	2	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	19	13	13	28	27	30	...	...	...	...
15. United States .....	..	20	13	13	14	16	17	...	...	...	...
16. Total deliveries of energy .....	..	49	35	32	48	48	55	...	...	...	...
17. Total energy available (6 + 11 - 16) .....	..	9,777	11,051	11,668	12,258	13,337	13,049	...	...	...	...
18. Secondary energy delivered within province .....											
19. Firm energy available within province (17 - 18) ..											
20. Indicated shortage .....											
21. Firm energy requirement within province (19 + 20)											
22. Firm energy requirement on province (12 + 13 + 21)											

TABLE 1b. Energy Supply and Requirements - Concluded

	Actual							Forecast			
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	..	112	131	146	152	174	...	...	...	...
2. Steam - Conventional .....							2	...	...	...	...
3. Nuclear .....							-	...	...	...	...
4. Internal combustion .....	..	..	14	15	21	14	19	...	...	...	...
5. Gas turbine .....							-	...	...	...	...
6. Total net generation .....	..	110	126	146	167	166	195	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	..	-	-	-	-	-
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	..	-	...	...	...	...
10. United States .....	..	..	..	..	..	..	-	...	...	...	...
11. Total receipts of energy .....	..	..	..	..	..	..	-	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	-	-	-	-	-	-	-	...	...	...	...
15. United States .....	-	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	-	-	-	-	-	-	-	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	110	126	146	167	166	195	...	...	...	...
18. Secondary energy delivered within province .....	..	5	12	28	26	28	42	...	...	...	...
19. Firm energy available within province (17 - 18) ..	64	105	114	118	141	138	153	208	209	211	216
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	64	105	114	118	141	138	153	208	209	211	216
22. Firm energy requirement on province (12 + 13 + 21)	64	105	114	118	141	138	153	208	209	211	216

Province	1951	1956	1957	1958	1959	1960	1961	Forecast				Percentage Change (compounded)		
								1962	1963	1964	1965	1951 1961	1957 1961	
thousands of kilowatts														
Newfoundland (including Labrador) ....	200	242	249	271	267	309	311	404	502	504	504	4.52	5.72	12.8
Prince Edward Island .....	18.	18	25	26	25	38	37	39	59	59	61	7.47	10.3	13.3
Nova Scotia .....	246	378	415	411	493	499	508	508	508	527	527	7.52	5.18	0.91
New Brunswick .....	196	286	321	372	373	388	436	476	534	534	592	8.32	7.95	7.95
Quebec .....	4,613	5,890	6,461	7,053	7,681	8,764	8,738	8,913	9,138	9,528	10,354	6.61	7.82	4.33
Ontario .....	2,824	4,565	4,932	5,881	6,275	6,650	6,858	7,529	8,102	8,399	8,993	9.28	8.60	7.00
Manitoba .....	423	602	639	734	734	932	905	1,033	1,033	1,138	1,243	7.90	9.08	8.20
Saskatchewan .....	245	402	463	538	671	752	757	754	833	922	922	11.94	13.08	5.05
Alberta .....	271	558	558	734	768	925	953	1,137	1,209	1,393	1,404	13.40	14.32	10.20
British Columbia .....	1,015	2,019	2,350	2,568	2,877	3,028	3,070	3,369	3,468	3,651	3,652	11.70	6.90	4.44
Yukon and Northwest Territories .....	21	23	26	40	41	55	55	56	59	61	61	10.10	20.60	2.62
Canada .....	10,072	14,983	16,439	18,628	20,205	22,340	22,628	24,218	25,445	26,716	28,313	8.43	8.39	5.76

(1) Table 1A, item 6.





Province	1951	1956	1957	1958	1959	1960	1961	Forecast				Percentage change (compounded)		
								1962	1963	1964	1965	1951 1961	1957 1961	1961 1965
millions of kilowatt hours														
Newfoundland (including Labrador) . . . .	1,040	1,226	1,190	1,178	1,215	1,320	1,361	1,679	2,099	2,338	2,534	2.73	3.42	16.81
Prince Edward Island . . . . .	34	53	57	63	71	79	88	102	110	123	134	10.00	11.50	11.09
Nova Scotia . . . . .	1,027	1,457	1,471	1,552	1,626	1,714	1,775	1,832	1,942	2,059	2,183	5.62	4.82	5.31
New Brunswick . . . . .	1,002	1,236	1,347	1,417	1,537	1,674	1,782	1,925	2,201	2,441	2,590	5.93	7.23	9.79
Quebec . . . . .	23,404	31,788	31,376	32,342	34,035	38,552	39,022	39,884	43,230	45,925	49,176	5.24	5.61	6.00
Ontario . . . . .	20,492	29,069	30,960	31,468	34,904	36,382	37,727	40,634	43,255	45,763	48,105	6.29	5.08	6.26
Manitoba . . . . .	2,443	3,258	3,347	3,576	3,889	4,201	4,698	5,023	5,266	5,499	5,762	6.76	8.85	5.23
Saskatchewan . . . . .	467	1,015	1,126	1,322	1,497	1,666	1,855	2,149	2,356	2,657	2,889	14.60	13.30	11.70
Alberta . . . . .	1,114	2,105	2,358	2,624	3,097	3,452	3,808	4,062	4,383	4,722	5,096	15.30	12.80	7.55
British Columbia . . . . .	4,741	9,777	10,975	11,579	12,091	13,104	12,807	14,670	15,419	16,293	17,166	10.50	3.94	7.59
Yukon and Northwest Territories . . . . .	64	105	114	118	141	138	153	208	209	211	216	9.11	7.63	9.01
Canada . . . . .	55,828	81,089	84,321	87,239	94,103	102,282	105,076	112,168	120,470	128,031	135,851	6.53	5.63	6.63

(1) Table 1B, item 21.

TABLE 5. Indicated Reserve(1)

Province	1951	1956	1957	1958	1959	1960	1961	Forecast				Percentage change (compounded)		
								1962	1963	1964	1965	1951 1961	1957 1961	1961 1965
thousands of kilowatts														
<u>Newfoundland (including Labrador):</u>														
1. Gross capability .....	200	242	249	271	267	309	311	404	502	504	504	4.51	5.70	12.82
2. Firm power peak load on province ...	182	230	228	239	238	259	255	316	369	415	423	3.43	2.90	13.47
3. Indicated reserve (1 - 2) .....	18	12	21	32	29	50	56	88	133	89	81	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	9.9	5.2	9.2	13.4	12.2	19.3	22.0	27.8	36.0	21.4	19.1	...	...	...
<u>Prince Edward Island:</u>														
1. Gross capability .....	18	18	25	26	25	38	37	39	59	59	61	7.47	10.30	13.30
2. Firm power peak load on province ...	8	12	14	16	19	21	24	26	29	32	36	11.61	14.42	10.70
3. Indicated reserve (1 - 2) .....	10	6	11	10	6	17	13	13	30	27	25	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	125.0	50.0	78.6	62.5	31.6	81.0	54.2	50.0	103.4	84.4	69.4	...	...	...
<u>Nova Scotia:</u>														
1. Gross capability .....	248	378	415	411	493	499	508	508	508	527	527	7.43	5.18	0.91
2. Firm power peak load on province ...	187	303	324	338	333	359	348	366	386	409	435	6.40	1.80	5.74
3. Indicated reserve (1 - 2) .....	61	75	91	73	160	140	160	142	122	118	92	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	32.6	24.8	28.1	21.6	48.0	39.0	46.0	38.8	31.6	28.9	21.1	...	...	...
<u>New Brunswick:</u>														
1. Gross capability .....	200	291	326	380	380	395	442	482	542	542	600	8.25	7.89	7.93
2. Firm power peak load on province ...	184	248	266	282	300	342	341	371	443	473	485	6.36	6.39	9.20
3. Indicated reserve (1 - 2) .....	16	43	60	98	80	53	101	111	99	69	115	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	8.7	17.3	22.6	34.8	26.7	15.5	29.6	29.9	22.3	14.6	23.7	...	...	...

(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18)

(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18)

Province	1951	1956	1957	1958	1959	1960	1961	Forecast			Percentage change (compounded)			
								1962	1963	1964	1965	1951 1961	1957 1961	1961 1965
thousands of kilowatts														
Quebec:														
1. Gross capability .....	4,614	5,901	6,468	7,062	7,690	8,780	8,759	8,934	9,157	9,546	10,372	6.62	7.87	4.31
2. Firm power peak load on province ...	4,197	5,540	6,008	6,105	6,219	6,626	6,992	7,336	7,825	8,293	8,905	5.24	3.82	6.24
3. Indicated reserve (1 - 2) .....	417	361	460	957	1,471	2,154	1,767	1,598	1,332	1,253	1,467	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	9.9	6.5	7.7	15.7	23.7	32.5	25.3	21.8	17.0	15.1	16.5	...	...	...
Ontario:														
1. Gross capability .....	3,568	5,267	5,637	6,549	6,967	7,344	7,553	8,225	8,800	9,099	9,785	7.79	7.59	6.70
2. Firm power peak load on province ...	3,378	5,151	5,456	5,881	6,242	6,479	6,706	7,185	7,577	7,993	8,422	7.10	5.29	5.86
3. Indicated reserve (1 - 2) .....	190	116	181	668	725	865	847	1,040	1,223	1,106	1,363	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	5.6	2.3	3.3	11.4	11.6	13.4	12.6	14.5	16.1	13.8	16.2	...	...	...
Manitoba:														
1. Gross capability .....	500	666	708	802	806	1,018	988	1,121	1,171	1,226	1,331	7.05	8.70	7.73
2. Firm power peak load on province ...	463	619	622	646	690	772	849	889	929	969	915	6.25	8.07	1.90
3. Indicated reserve (1 - 2) .....	37	47	86	156	116	246	139	232	142	257	416	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	8.0	7.6	13.8	24.1	16.8	31.9	16.4	26.1	15.3	26.5	45.5	...	...	...
Saskatchewan:														
1. Gross capability .....	245	402	463	539	672	753	757	754	833	922	922	11.94	13.06	5.00
2. Firm power peak load on province ...	204	342	368	421	449	504	554	616	716	722	779	10.50	10.74	8.89
3. Indicated reserve (1 - 2) .....	41	60	95	118	223	249	203	138	117	200	143	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	20.1	17.5	25.8	28.0	49.7	49.4	36.6	22.4	16.3	27.7	18.4	...	...	...

(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18).

(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18).

TABLE 5. Indicated Reserve(1) - Concluded

Province	1951	1956	1957	1958	1959	1960	1961	Forecast				Percentage change (compounded)		
	1962	1963	1964	1965	1966	1967	1968	1962	1963	1964	1965	1951 1961	1957 1961	1961 1965
thousands of kilowatts														
Alberta:														
1. Gross capability .....	271	562	592	738	771	928	953	1,137	1,209	1,393	1,404	13.40	12.63	10.20
2. Firm power peak load on province ...	225	451	476	581	650	715	841	881	957	1,040	1,134	14.10	15.28	7.75
3. Indicated reserve (1 - 2) .....	46	111	116	157	121	213	112	256	252	353	270	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	20.4	24.6	24.4	27.0	18.6	29.8	13.3	29.1	26.3	33.9	23.8	...	...	...
British Columbia:														
1. Gross capability .....	1,020	2,071	2,350	2,568	2,877	3,028	3,075	3,374	3,474	3,658	3,659	11.66	7.00	4.42
2. Firm power peak load on province ...	891	1,729	1,825	1,939	1,966	2,126	2,368	2,455	2,595	2,751	2,868	10.27	6.72	4.90
3. Indicated reserve (1 - 2) .....	129	342	525	629	911	902	707	919	879	907	791	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	14.5	19.8	28.8	32.4	46.3	42.4	29.9	37.4	33.9	33.0	27.6	...	...	...
Yukon and Northwest Territories:														
1. Gross capability .....	21	23	26	40	41	55	55	56	59	61	61	10.11	20.60	2.62
2. Firm power peak load on province ...	14	19	19	30	31	34	29	40	42	44	44	7.55	11.14	11.00
3. Indicated reserve (1 - 2) .....	7	4	7	10	10	21	26	16	17	17	17	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	50.0	21.1	36.8	33.3	32.3	61.8	89.7	40.0	40.5	38.6	38.6	...	...	...
Canada:														
1. Gross capability .....	10,076	15,039	16,469	18,628	20,205	22,340	22,630	24,220	25,448	26,719	28,316	8.43	8.27	5.76
2. Firm power peak load on Canada .....	9,485	13,862	14,816	15,720	16,353	17,430	18,499	19,669	21,002	22,323	23,536	7.00	5.70	6.20
3. Indicated reserve (1 - 2) .....	591	1,177	1,653	2,908	3,852	4,910	4,131	4,551	4,446	3,396	4,780	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	6.2	8.5	11.2	18.5	23.5	28.2	22.3	23.1	21.2	15.2	20.3	...	...	...
(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18).														

(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18).

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.



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ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

1962 Actual

1963 - 1966 Forecast



DOMINION BUREAU OF STATISTICS



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Catalogue number	Title	Price
Annual		
57-201	Electric and Gas Meter Registrations. Approx. 250pp.  Meter registrations by province, county or census division, company and place served, by type of service .....	\$2.5
57-202	Electric Power Statistics. Approx. 48pp.  Summary and detailed analyses of generation and use of electric power in Canada, power plant equipment, customers, employees, salaries and wages and financial statistics .....	.7
57-203	Electricity Bills for Domestic, Commercial and Small Power Service. Approx. 15pp.  Includes an annual index of electricity bills for domestic service, and bills for light and power in cities and represen- tative municipalities .....	.5
57-204	Electric Power Survey of Capability and Load. Approx. 45pp.  Current and projected data of capability and load of major producers of electric energy in Canada .....	.7
Monthly		
57-001	Electric Power Statistics. Approx. 4pp.  Production by utilities and industrial establishments, imports and exports, power made available for use in Canada, amount used in electric boilers, by provinces. Per copy 10¢; per year .....	\$1.0
Occasional		
57-502	Inventory of Prime Mover and Electric Generating Equipment. Approx. 120pp.  A list of generating plants in Canada by ownership showing the location, year of installation, name-plate rating and other details of each unit, as at December 31, 1961 .....	\$1.5

## TABLE OF CONTENTS

	Page
Introduction .....	5

### CHARTS

A. Total Generating Capability within Canada .....	8
This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	
B. Net Capability and Peak Loads within Canada .....	9
This chart provides an indication of the reserves available to meet firm demand for electric power within Canada.	
C. Net Generating Capability within Provinces .....	10
This chart illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.	
D. Net Capability and Firm Demand within Provinces .....	12
This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.	
E. Firm Energy Requirement within Canada .....	14
This chart shows the growth in Canadian firm energy requirement during the period 1951-1966.	

### TABLES

A. <u>Capability and Firm Power Peak Load Requirements</u> .....	15
This table summarizes capability, firm power peak load and indicated reserve for Canada and for each of the provinces.	
B. <u>Energy Supply and Requirements</u> .....	27
This table summarizes current and historical data on generation, interprovincial receipts and deliveries, secondary energy, and firm energy requirements.	
C. <u>Total Net Generating Capability within Provinces</u> .....	39
This table compares provincial rates of growth in net generating capability.	
D. <u>Firm Power Peak Load within Provinces</u> .....	40
This table compares rates of growth of firm power peak load within provinces.	
E. <u>Firm Energy Requirement within Provinces</u> .....	41
This table compares rates of growth of firm energy requirement within provinces.	
F. <u>Indicated Reserve</u> .....	42
This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	

Glossary of Terms .....	45
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### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

r Revised figures.

.. Figures not available.

... Figures not appropriate or not applicable.

- Nil or zero.

## INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1963. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions.

There are approximately 146 responding firms in the group, of which 46 per cent are utilities and the balance industrial establishments. The combined group accounts for 99.6 per cent of all generation, and all the imports and exports. The utilities group contributes 79 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable in making possible the early release of the survey data.

## Review of Survey Results

Total net generating capability in 1962 for firms which generate over 10 million kwh. per year increased 1,241,000 kw., or 5.52 per cent, to 23,869,000 kw. The forecast years, 1963-1966, indicate a growth of 5,169,000 kw., or a compound growth rate of 4.8 per cent, as compared with the previous eleven-year period, 1951-1962, when the growth rate was 8.2 per cent. Thermal capability is expected to grow at the rate of 9.8 per cent per year in the forecast period, compared to 15.7 per cent in the previous eleven-year period, while hydro-electric capability is expected to increase at 3.5 per cent per year compared to 6.8 per cent in the previous eleven years. Most of the thermal capability increase will be in steam plants. There will be a small growth in the thermal capability of gas turbines, while the thermal capability of internal combustion plants will be virtually unchanged.

The first nuclear capability is forecast for 1965, although this may be postponed, due to delays in construction or bringing the plant on line. The nuclear capability does not include the 0,000 kw. plant at Rolphton, Ontario, which is an experimental plant and not considered part of capability.

The 1962 forecast of generating capability was 349,000 kw. higher than that actually obtained, indicating a delay in completing some plants until the period 1963-1964. The forecast for 1962 generating capability was approximately realized in all provinces except Ontario, which was significantly under the forecast, and which accounted for 88 per cent of the difference between the 1962 capability as forecast and the actual net generating capability.

The largest absolute growths in generating capability for the forecast years are indicated for Ontario - 1,985,000 kw., Quebec - 1,427,000 kw., Alberta - 498,000 kw., and British Columbia - 379,000 kw. Whereas Quebec will meet most of the increased generating capability by adding over 1,127,000 kw. in hydro capability and 300,000 kw. in thermal capability, Ontario plans to increase its capability by adding 1,478,000 kw. in thermal capability, including 200,000 nuclear kw. and only 508,000 hydro kw. Alberta plans to add 228,000 kw. in thermal capability and 300,000 kw. in hydro capability.

The firm power peak loads have not shown the same change in rate of growth as generating capability. In the period from 1951 to 1962 the growth rate of firm power peak loads in Canada was 7 per cent, while the forecast rate of growth for the period from 1962 to 1966 is 6.5 per cent. As a result, the indicated reserve is expected to amount to 5,007,000 kw. in 1963, is expected to increase in 1964, and is expected to decline in 1965-1966 to 4,987,000 kw. and 4,526,000 kw. respectively. The indicated reserve, stated as a percentage of firm power peak load, is forecast to decline steadily throughout the forecast period, from 23.4 per cent in 1963 to 17.9 per cent in 1966.

From 1961 to 1962 firm energy requirements increased 5.7 per cent from 105,076 million kwh. to 11,043 million kwh., an increase of 5,967 million kwh. This increased requirement was supplied by an increase in net generation of 3,760 million kwh., a drop in net exports of 1,482 million kwh., and a decrease in the amount of secondary power consumed in Canada of 725 million kwh. All provinces share in the current increase. This rate of growth of firm energy requirements compares to a growth rate of 6.5 per cent in the previous eleven-year period, and the growth rate of 6.2 per cent that is forecast for the period from 1962 to 1966.

In co-operation with the National Energy Board, the Dominion Bureau of Statistics conducted a survey of thirty-one large producers of electric energy located in all provinces except Prince Edward Island. These firms were asked to supply us with daily load curve data for both December 20, 1962, a the day of their firm power peak for the year 1962. The data was to cover the reporting firm's system and all systems within it. Among other things, these reports showed the net generation of the reporting system for each hour of December 20 and the day of the system's firm power peak load.

The result of the survey indicated that the net generation of power usually reached its hourly peak at 6 p.m. on the day of firm power peak load, and that the low point was at 4 a.m. From 4 a.m. to 12 noon the curve rose, with the sharpest increase in demand coming between 7 a.m. and 8 a.m. From 12 noon to 1 p.m. the curve declined slightly and levelled off between 1 p.m. and 4 p.m. At 4 p.m. the rise to the 6 p.m. peak started, and from 6 p.m. to 12 midnight there was a steady decline. The variation in net generation on the day of firm peak power load for Canada, based on the figures supplied by these 31 firms, varied by about 68 per cent between the low point at 4 a.m. and the peak at 6 p.m.

### Concepts and Definitions

Table 1A. Capability and Firm Power Peak Load Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. However, more detail has been provided in the generating capability which is now broken down to identify conventional steam, nuclear steam, internal combustion, and gas turbine equipment. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may be equal to, or smaller than, the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plant capacity; the impossibility of placing all pieces of equipment on the line at the same time, low water ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1A of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sum of the actual peak loads regardless of time of occurrence) and may be equal to, or smaller than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty-nine major systems serving Canada, eleven had peak loads on December 20, three on December 21, 14 on other dates between November 30 and January 31 and eleven outside this period.

Receipts and deliveries of firm power used in calculating net capability are the inter-provincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

#### Table 1B. Energy Supply and Requirements:

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1962, are subdivided by type of generation. No forecasts of generation are given for 1963-66.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts or obligations.

Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

Indicated shortage is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).



CHART-A

# TOTAL GENERATING CAPABILITY WITHIN CANADA 1951-1966

THOUSANDS OF KILOWATTS  
30,000

THOUSANDS OF KILOWATTS  
30,000

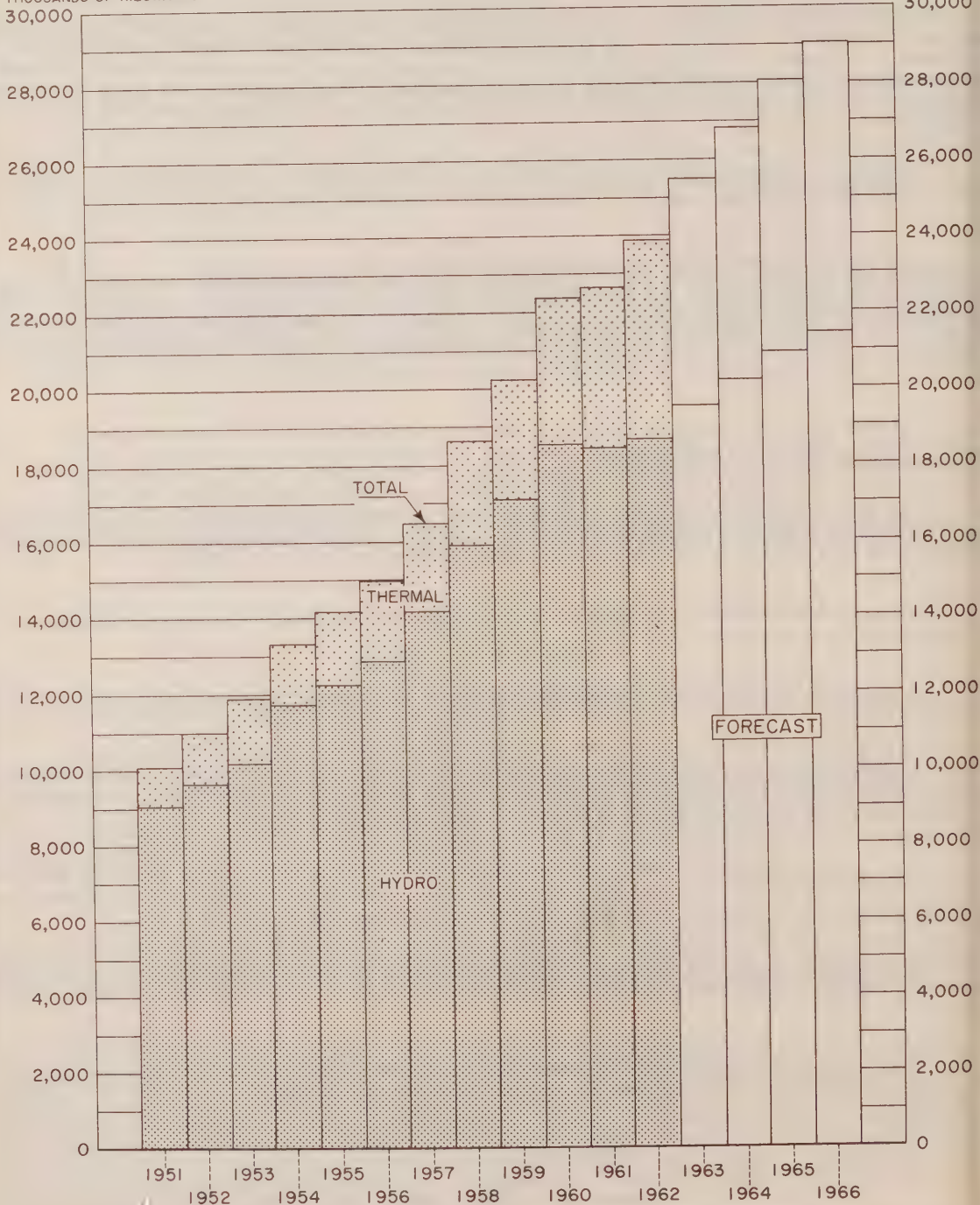
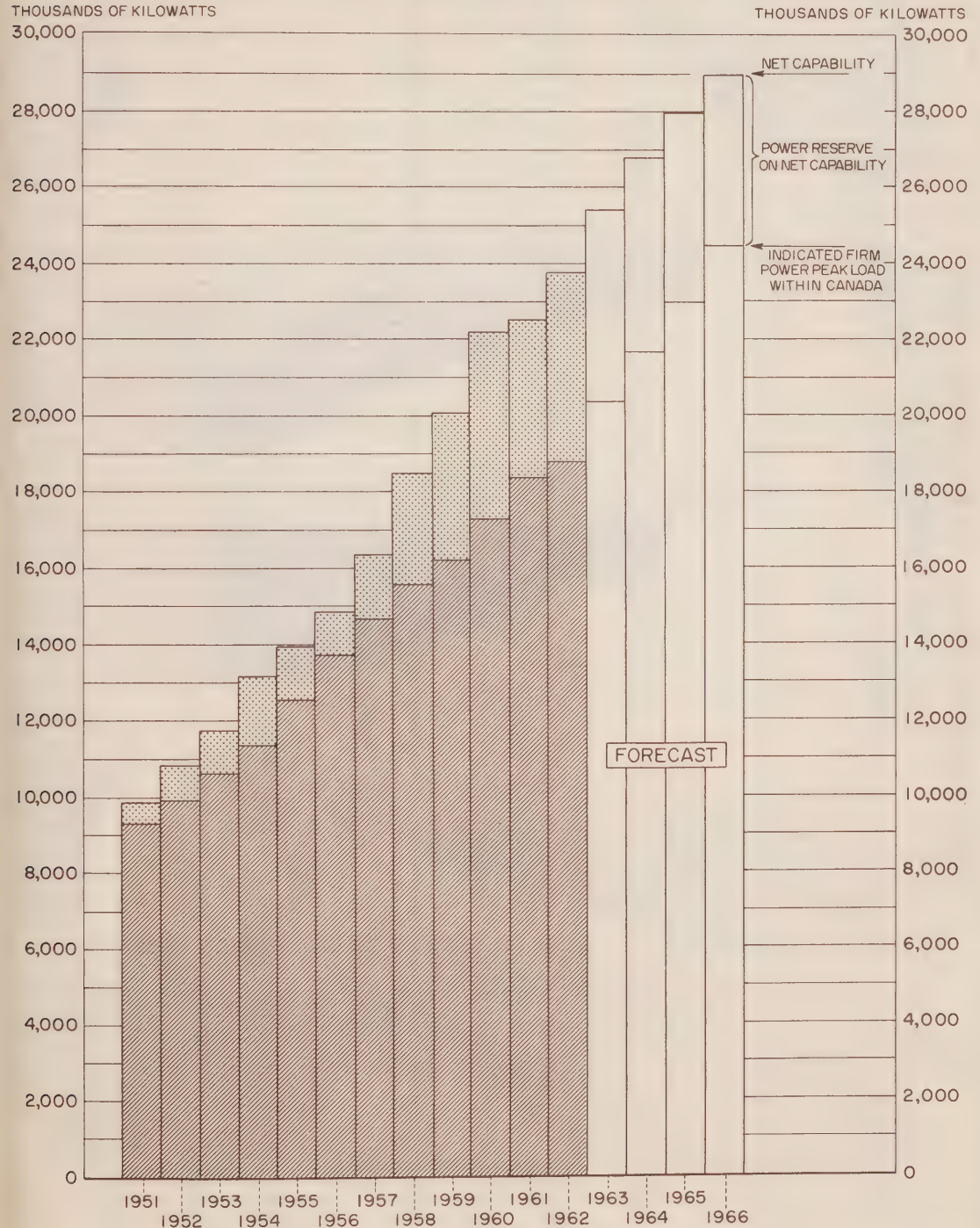




CHART-B

# NET CAPABILITY AND PEAK LOADS WITHIN CANADA

1951-1966





# NET GENERATING CAPABILITY WITHIN PROVINCES

1951-1966

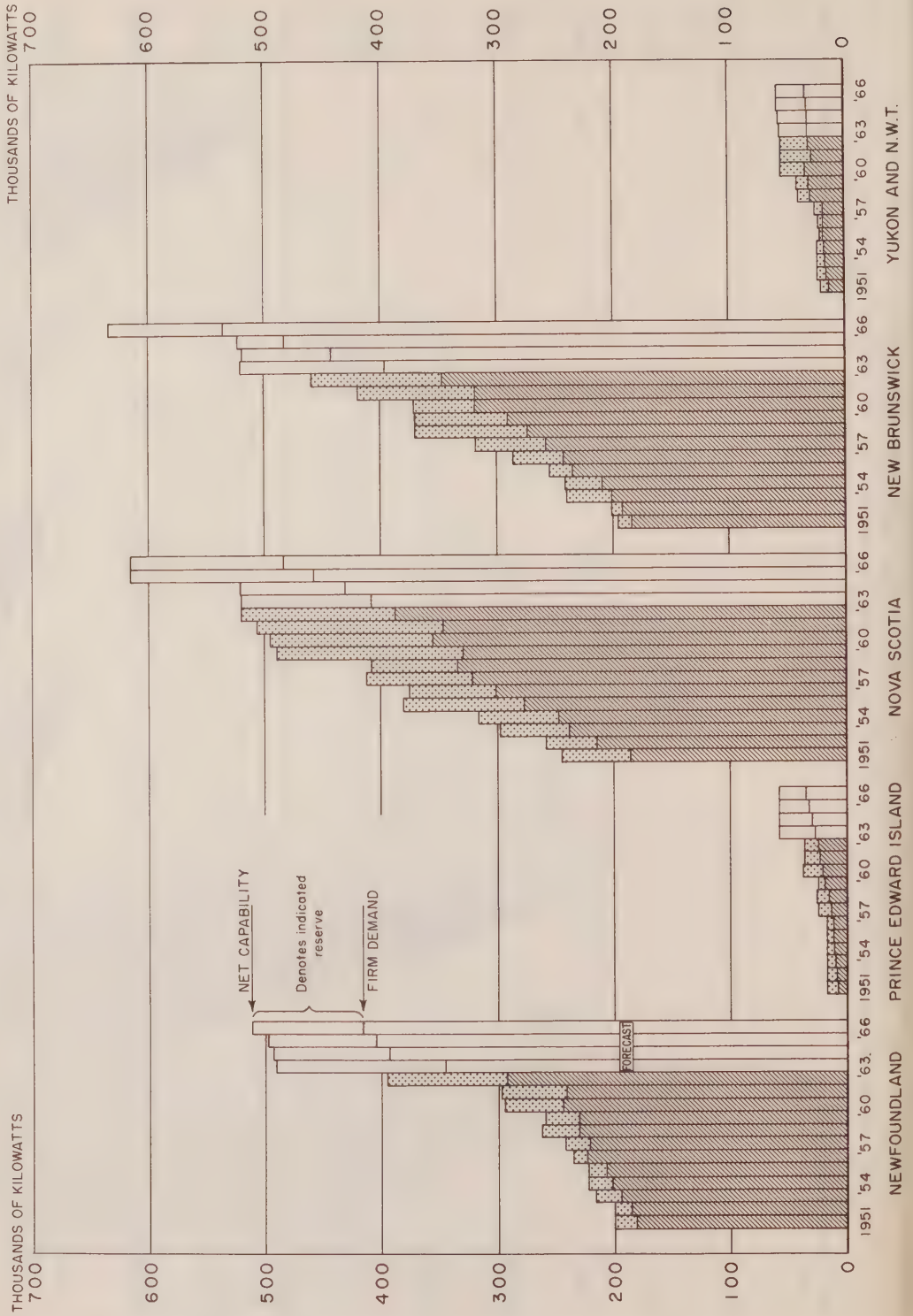
CHART - C





CHART-D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1951-1966



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1951-1966





CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1951-1966

BILLIONS OF KILOWATTHOURS

BILLIONS OF KILOWATTHOURS

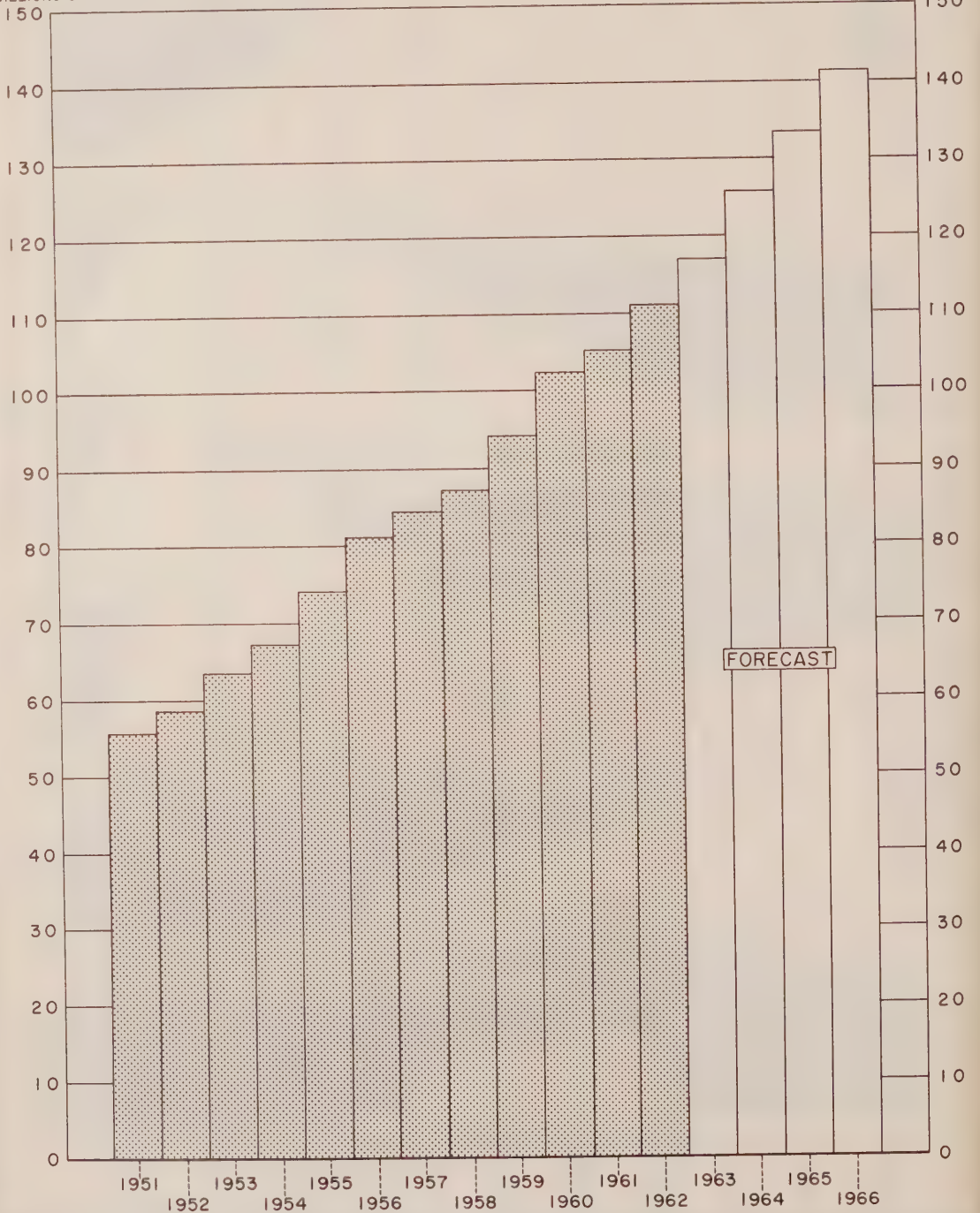


TABLE 1A. Capacity and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
thousands of kilowatts											
Capacity:											
Net generating capacity:											
1. Hydro-electric .....	9,044	14,143	15,912	17,086	18,516	18,389	18,651	19,497	20,184	20,937	21,441
2. Steam - Conventional)						( 3,648	4,596	5,377	5,993	6,268	6,728
3. Nuclear ) .....	1,032	2,326	2,716	3,119	3,824	(	-	-	-	200	200
4. Internal combustion )						( 240	251	248	255	258	262
5. Gas turbine )						( 351	371	376	379	379	397
6. Total net generating capacity	10,076	16,469	18,628	20,205	22,340	22,628	23,869	25,498	26,811	28,042	29,028
Receipts of firm power from:											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States .....	-	-	-	-	-	2	4	4	4	4	4
9. Total receipts .....	-	-	-	-	-	2	4	4	4	4	4
Deliveries of firm power to:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States .....	175	150	152	152	166	146	121	118	69	70	56
12. Total deliveries .....	175	150	152	152	166	146	121	118	69	70	56
13. Total net capacity (6 + 9 - 12) .....	9,901	16,319	18,476	20,053	22,174	22,484	23,752	25,384	26,746	27,976	28,976
Peak loads:											
14. Firm power peak load within Canada .....	8,989	14,664	15,568	16,201	17,264	18,353	18,972	20,377	21,656	22,988	24,446
15. Indicated shortages .....	321	2	-	-	-	-	-	-	-	1	4
16. Total indicated firm power peak load within Canada (14 + 15) .....	9,310	14,666	15,568	16,201	17,264	18,353	18,972	20,377	21,656	22,989	24,450
17. Firm power peak load on Canada (12 + 16) ..	9,485	14,816	15,720	16,353	17,430	18,499	19,093	20,495	21,725	23,059	24,506
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	591	1,653	2,908	3,852	4,910	4,131	4,780	5,007	5,090	4,987	4,526

TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	thousands of kilowatts										
<b>Capability:</b>											
Net generating capability:											
1. Hydro-electric .....	188	220	243	243	255	258	350	446	446	450	454
2. Steam - Conventional)						( 40	45	45	45	45	55
3. Nuclear ) .....	12	29	28	24	54	( -	-	-	-	-	-
4. Internal combustion ) .....						( 13	14	15	17	17	17
5. Gas turbine ) .....						( -	-	-	-	-	-
6. Total net generating capability	200	249	271	267	309	311	409	506	508	512	526
<b>Receipts of firm power from:</b>											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
<b>Deliveries of firm power to:</b>											
10. Other provinces .....	-	6	8	7	14	13	13	14	14	14	14
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	6	8	7	14	13	13	14	14	14	14
13. Total net capability (6 + 9 - 12) .....	200	243	263	260	295	298	396	492	494	498	512
<b>Peak loads:</b>											
14. Firm power peak load within province .....	182	222	231	231	245	242	294	347	394	405	416
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	182	222	231	231	245	242	294	347	394	405	416
17. Firm power peak load on province (12 + 16)	182	228	239	238	259	255	307	361	408	419	430
<b>Indicated reserve:</b>											
18. Indicated reserve (13 - 16) .....	18	21	32	29	50	56	102	145	100	93	96

TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	-	-	-	-	-	-	-	-	-	-	-
2. Steam - Conventional)						(32	32	52	52	52	52
3. Nuclear )	18	25	26	25	38	(	-	-	-	-	-
4. Internal combustion )						(5	5	7	7	7	7
5. Gas turbine )						(	-	-	-	-	-
6. Total net generating capability	18	25	26	25	38	37	37	59	59	59	59
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	18	25	26	25	38	37	37	59	59	59	59
<u>Peak loads:</u>											
14. Firm power peak load within province .....	8	14	16	19	21	24	25	28	30	33	36
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	8	14	16	19	21	24	25	28	30	33	36
17. Firm power peak load on province (12 + 16)	8	14	16	19	21	24	25	28	30	33	36
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	10	11	10	6	17	13	12	31	29	26	23

TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	114	126	127	126	132	141	141	141	141	141	141
2. Steam - Conventional )						(365	378	378	378	473	473
3. Nuclear )						(	-	-	-	-	-
4. Internal combustion )	134	289	284	367	367	(	2	2	2	2	2
5. Gas turbine )						(	-	-	-	-	-
6. Total net generating capability	248	415	411	493	499	508	521	521	521	616	616
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	2	2	3	3	3	1	1	1	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	2	2	3	3	3	1	1	1	-	-	-
13. Total net capability (6 + 9 - 12) .....	246	413	408	490	496	507	520	520	521	616	616
Peak loads:											
14. Firm power peak load within province .....	185	322	335	330	356	347	388	409	431	458	484
15. Indicated shortages .....	2	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	187	322	335	330	356	347	388	409	431	458	484
17. Firm power peak load on province (12 + 16)	189	324	338	333	359	348	389	410	431	458	484
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	59	91	73	160	140	160	132	111	90	158	132



TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
thousands of kilowatts											
<b>Capability:</b>											
Net generating capability:											
1. Hydro-electric .....	90	148	185	185	186	185	233	233	233	240	241
2. Steam - Conventional )						(243	240	298	298	298	394
3. Nuclear ) .....						(	-	-	-	-	-
4. Internal combustion )	108	173	187	188	202	(	7	7	7	7	7
5. Gas turbine )						(	-	-	-	-	-
6. Total net generating capability	198	321	372	373	388	436	480	538	538	545	642
Receipts of firm power from:											
7. Other provinces .....	2	5	8	7	7	6	6	6	8	6	7
8. United States .....	-	-	-	-	-	-	2	2	2	2	2
9. Total receipts .....	2	5	8	7	7	6	8	8	10	8	9
Deliveries of firm power to:											
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
11. United States .....	4	8	9	9	23	22	28	25	29	30	16
12. Total deliveries .....	4	8	9	9	23	22	28	25	29	30	16
13. Total net capability (6 + 9 - 12) .....	196	318	371	371	372	420	460	521	519	523	635
<b>Peak loads:</b>											
14. Firm power peak load within province .....	184	258	273	291	319	319	347	397	443	484	536
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	184	258	273	291	319	319	347	397	443	484	536
17. Firm power peak load on province (12 + 16)	188	266	282	300	342	341	375	422	472	514	552
<b>Indicated reserve:</b>											
18. Indicated reserve (13 - 16) .....	12	60	98	80	53	101	113	124	76	39	99

Quebec

TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	thousands of kilowatts										
<b>Capability:</b>											
Net generating capability:											
1. Hydro-electric .....	4,587 <sup>F</sup>	6,406	6,992	7,612	8,658	8,628	8,830	9,065	9,323	9,830	9,957
2. Steam - Conventional)						( 59	41	41	191	341	341
3. Nuclear )						( -	-	-	-	-	-
4. Internal combustion )	26	55	61	69	106	( 15	12	12	12	12	12
5. Gas turbine )						( 36	36	36	36	36	36
6. Total net generating capability	4,613 <sup>F</sup>	6,461	7,053	7,681	8,764	8,738	8,919	9,154	9,562	10,219	10,346
<b>Receipts of firm power from:</b>											
7. Other provinces .....	1	7	9	9	16	19	15	16	16	16	16
8. United States .....	-	-	-	-	-	2	2	2	2	2	2
9. Total receipts .....	1	7	9	9	16	21	17	18	18	18	18
<b>Deliveries of firm power to:</b>											
10. Other provinces .....	735	694	673	696	698	696	697	699	700	701	704
11. United States .....	56	56	57	57	57	38	4	4	4	4	4
12. Total deliveries .....	791	750	730	753	755	734	701	703	704	705	708
13. Total net capability (6 + 9 - 12) .....	3,823 <sup>F</sup>	5,718	6,332	6,937	8,025	8,025	8,235	8,469	8,876	9,532	9,656
<b>Peak loads:</b>											
14. Firm power peak load within province .....	3,462	5,256	5,375	5,466	5,871	6,258	6,370	6,836	7,249	7,750	8,244
15. Indicated shortages .....	-	2	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	3,462	5,258	5,375	5,466	5,871	6,258	6,370	6,836	7,249	7,750	8,244
17. Firm power peak load on province (12 + 16)	4,253	6,008	6,105	6,219	6,626	6,992	7,071	7,539	7,953	8,455	8,952
<b>Indicated reserve:</b>											
18. Indicated reserve (13 - 16) .....	361 <sup>F</sup>	460	957	1,471	2,154	1,767	1,865	1,633	1,627	1,782	1,412

TABLE 1A. Capability and Firm Power Peak Load Requirements

Ontario

Actual							Forecast				
1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	2,476	4,145	5,081	5,467	5,464	5,292	5,285	5,536	5,661	5,793	
2. Steam - Conventional)						(1,555	1,926	2,640	2,922	3,204	
3. Nuclear )	348	787	800	808	1,186	(	-	-	-	200	
4. Internal combustion )						( 11	12	9	9	10	
5. Gas turbine )						(	-	-	-	-	
6. Total net generating capability	2,824	4,932	5,881	6,275	6,650	6,858	7,223	8,185	8,467	8,793 9,208	
Receipts of firm power from:											
7. Other provinces .....	744	705	668	692	694	695	692	694	692	693 694	
8. United States .....	-	-	-	-	-	-	-	-	-	-	
9. Total receipts .....	744	705	668	692	694	695	692	694	692	693 694	
Deliveries of firm power to:											
10. Other provinces .....	1	1	1	2	2	5	2	2	2	2	
11. United States .....	85	86	86	86	86	86	89	89	36	36	
12. Total deliveries .....	86	87	87	88	88	91	91	91	38	38	
13. Total net capability (6 + 9 - 12) .....	3,482	5,550	6,462	6,879	7,256	7,462	7,824	8,788	9,121	9,448 9,864	
Peak loads:											
14. Firm power peak load within province .....	3,292	5,369	5,794	6,154	6,391	6,615	6,913	7,376	7,789	8,219 8,688	
15. Indicated shortages .....	319	-	-	-	-	-	-	-	-	-	
16. Total indicated firm power peak load within province (14 + 15) .....	3,611	5,369	5,794	6,154	6,391	6,615	6,913	7,376	7,789	8,219 8,688	
17. Firm power peak load on province (12 + 16)	3,697	5,456	5,881	6,242	6,479	6,706	7,004	7,467	7,827	8,257 8,726	
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	- 129	181	668	725	865	847	911	1,412	1,332	1,229 1,176	

TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	413	561	566	566	701	735	735	735	945	1,050	1,050
2. Steam - Conventional)						(166	291	291	291	291	291
3. Nuclear ) .....	10	78	168	168	231	(	-	-	-	-	-
4. Internal combustion )						( 4	7	8	8	8	9
5. Gas turbine )						(	-	-	-	-	-
6. Total net generating capability	423	639	734	734	932	905	1,033	1,034	1,244	1,349	1,350
Receipts of firm power from:											
7. Other provinces .....	77	69	68	72	86	83	87	138	88	88	88
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	77	69	68	72	86	83	87	138	88	88	88
Deliveries of firm power to:											
10. Other provinces .....	9	14	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	9	14	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	491	694	802	806	1,018	988	1,120	1,172	1,332	1,437	1,438
<u>Peak loads:</u>											
14. Firm power peak load within province .....	454	608	646	690	772	849	907	943	984	1,029	1,080
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	454	608	646	690	772	849	907	943	984	1,029	1,080
17. Firm power peak load on province (12 + 16)	463	622	646	690	772	849	907	943	984	1,029	1,080
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	37	86	156	116	246	139	213	229	348	408	358

TABLE 1A. Capacity and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
thousands of kilowatts											
<u>Capacity:</u>											
Net generating capability:											
1. Hydro-electric .....	85	87	87	88	99	107	107	246	315	315	315
2. Steam - Conventional)						( 572	575	493	493	523	523
3. Nuclear ) .....	160	376	451	583	653	(	-	-	-	-	-
4. Internal combustion ) .....						( 35	37	36	35	35	35
5. Gas turbine ) .....						( 43	33	33	33	33	33
6. Total net generating capability	245	463	538	671	752	757	752	808	876	906	906
Receipts of firm power from:											
7. Other provinces .....	-	-	1	1	1	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	1	1	1	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	77	69	68	72	86	88	87	138	88	88	88
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	77	69	68	72	86	88	87	138	88	88	88
13. Total net capability (6 + 9 - 12) .....	168	394	471	600	667	669	665	670	788	818	818
<u>Peak loads:</u>											
14. Firm power peak load within province .....	127	299	353	377	418	466	497	535	579	639	694
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	127	299	353	377	418	466	497	535	579	639	694
17. Firm power peak load on province (12 + 16)	204	368	421	449	504	554	584	673	667	727	782
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	41	95	118	223	249	203	168	135	209	179	124



TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
thousands of kilowatts											
<b>Capability:</b>											
Net generating capability:											
1. Hydro-electric .....	162	238	238	238	318	327	327	327	477	477	627
2. Steam - Conventional)						(498	643	714	746	746	818
3. Nuclear ) .....						(	-	-	-	-	-
4. Internal combustion ) .....	109	350	496	530	607	(	33	34	34	36	38
5. Gas turbine ) .....						(100	130	130	130	130	148
6. Total net generating capability	271	588	734	768	925	953	1,133	1,205	1,387	1,389	1,631
Receipts of firm power from:											
7. Other provinces .....	-	4	4	3	3	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	4	4	3	3	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	5	-	1	1	1	5	4	6	7	7	7
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	5	-	1	1	1	5	4	6	7	7	7
13. Total net capability (6 + 9 - 12) .....	266	592	737	770	927	948	1,129	1,199	1,380	1,382	1,624
Peak loads:											
14. Firm power peak load within province .....	220	476	580	649	714	836	882	969	1,063	1,160	1,275
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	220	476	580	649	714	836	882	969	1,063	1,160	1,275
17. Firm power peak load on province (12 + 16)	225	476	581	650	715	841	886	975	1,070	1,167	1,282
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	46	116	157	121	213	112	247	230	317	222	349

TABLE 1A. Capability and Firm Power Peak Load Requirements

Actual							Forecast				
1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	908	2,187	2,356	2,524	2,659	2,672	2,599	2,723	2,727	2,817	
2. Steam - Conventional)						( 117	424	576	576	576	
3. Nuclear ) .....						(	-	-	-	-	
4. Internal combustion )	107	163	212	353	369	( 109	112	114	114	114	
5. Gas turbine ) .....						( 172	172	179	179	179	
6. Total net generating capability	1,015	2,350	2,568	2,877	3,028	3,070	3,307	3,432	3,596	3,686	
Receipts of firm power from:											
7. Other provinces .....	5	-	-	-	-	5	4	6	7	9	
8. United States .....	-	-	-	-	-	-	-	-	-	-	
9. Total receipts .....	5	-	-	-	-	5	4	6	7	9	
Deliveries of firm power to:											
10. Other provinces .....	-	4	4	3	3	-	-	-	-	-	
11. United States .....	30	-	-	-	-	-	-	-	-	-	
12. Total deliveries .....	30	4	4	3	3	-	-	-	-	-	
13. Total net capability (6 + 9 - 12) .....	990	2,346	2,564	2,874	3,025	3,075	3,311	3,438	3,599	3,605	
Peak loads:											
14. Firm power peak load within province .....	861	1,821	1,935	1,963	2,123	2,368	2,317	2,504	2,661	2,777	
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	1	
16. Total indicated firm power peak load within province (14 + 15) .....	861	1,821	1,935	1,963	2,123	2,368	2,317	2,504	2,661	2,778	
17. Firm power peak load on province (12 + 16)	891	1,825	1,939	1,966	2,126	2,368	2,317	2,504	2,661	2,778	
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	129	525	629	911	902	707	994	934	938	827	

TABLE 1A. Capability and Firm Power Peak Load Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	21	25	37	37	44	44	44	45	45	46	46
2. Steam - Conventional )						( 1	1	1	1	1	1
3. Nuclear ) .....						( -	-	-	-	-	-
4. Internal combustion )	-	1	3	4	11	( -	-	10	10	10	10
5. Gas turbine )						( -	-	1	1	1	1
6. Total net generating capability	21	26	40	41	55	55	55	56	57	58	58
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	21	26	40	41	55	55	55	56	57	58	58
<u>Peak loads:</u>											
14. Firm power peak load within province .....	14	19	30	31	34	29	32	33	33	34	35
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	14	19	30	31	34	29	32	33	33	34	35
17. Firm power peak load on province (12 + 16)	14	19	30	31	34	29	32	33	33	34	35
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	7	7	10	10	21	26	23	23	24	24	23

TABLE 1B. Energy Supply and Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	82,973	90,250	96,517	105,770	103,692	103,695	...	...	...	...
2. Steam - Conventional )						( 8,822	12,543	...	...	...	...
3. Nuclear )						( -	22	...	...	...	...
4. Internal combustion )	..	7,288	6,507	7,339	8,271	( 509	514	...	...	...	...
5. Gas turbine )						( 248	257	...	...	...	...
6. Total net generation .....	..	90,261	96,757	103,856	114,041	113,271	117,031	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	...	...	...	...	...	...	...	...	...	...
8. United States .....	..	..	..	..	..	..	22	24	24	25	26
(b) Secondary:											
9. Other provinces .....	..	...	...	...	...	...	...	...	...	...	...
10. United States .....	..	..	..	..	..	1,392	2,764	...	...	...	...
11. Total receipts of energy .....	..	831	244	515	367	1,400	2,786	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	1,418	1,172	1,264	1,253	1,283	1,122	817	828	587	541	448
13. United States .....	..	..	..	..	..	..	..	...	...	...	...
(b) Secondary:											
14. Other provinces .....	..	...	...	...	...	...	...	...	...	...	...
15. United States .....	..	3,613	2,883	3,331	4,228	3,058	3,267	...	...	...	...
16. Total deliveries of energy .....	..	4,785	4,147	4,584	5,511	4,180	4,084	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	86,307	92,854	99,787	108,897	110,491	115,733	...	...	...	...
18. Secondary energy delivered within Canada .....	..	2,540	5,615	5,684	6,615	5,415	4,690	...	...	...	...
19. Firm energy available within Canada (17 - 18) ....	55,516	83,767	87,239	94,103	102,282	105,076	111,043	117,047	125,667	133,383	141,344
20. Indicated shortage .....	312	554	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within Canada (19 + 20) ..	55,828	84,321	87,239	94,103	102,282	105,076	111,043	117,047	125,667	133,383	141,344
22. Firm energy requirement on Canada (12 + 13 + 21) ..	57,246	85,493	88,503	95,356	103,565	106,198	116,622	122,938	131,364	139,017	146,899

TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	1,305	1,330	1,320	1,403	1,322	1,556	...	...	...	...
2. Steam - Conventional)						( 116	101	...	...	...	...
3. Nuclear )						( -	-	...	...	...	...
4. Internal combustion )	..	50	40	54	76	( -	9	...	...	...	...
5. Gas turbine )						( -	-	...	...	...	...
6. Total net generation .....	..	1,355	1,370	1,374	1,479	1,448	1,666	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	-	-	-	-	-	-
8. United States .....	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	-	-	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	-	9	-	-	-	-	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	46	44	33	49	80	81	83	83	83	83
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	..	2	18	36	3	-	...	...	...	...
15. United States .....	..	..	..	..	..	-	-	...	...	...	...
16. Total deliveries of energy .....	..	46	46	51	85	83	81	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	1,309	1,333	1,323	1,394	1,365	1,585	...	...	...	...
18. Secondary energy delivered within province .....											
19. Firm energy available within province (17 - 18) ..											
20. Indicated shortage .....											
21. Firm energy requirement within province (19 + 20)											
22. Firm energy requirement on province (12 + 13 + 21)											



TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	-	-	-	-	-	-	...	...	...	...
2. Steam - Conventional )						(81	93	...	...	...	...
3. Nuclear )						(-	-	...	...	...	...
4. Internal combustion )	..	57	63	71	79	(	8	...	...	...	...
5. Gas turbine )						(-	-	...	...	...	...
6. Total net generation .....	..	57	63	71	79	88	101	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	-	-	-	-	-	-	-	-	-	-
8. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	-	-	-	-	-	-	...	...	...	...
10. United States .....	..	-	-	-	-	-	-	...	...	...	...
11. Total receipts of energy .....	..	-	-	-	-	-	-	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	-	-	-	-	-	-	-	...	...	...	...
15. United States .....	-	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	-	-	-	-	-	-	-	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	57	63	71	79	88	101	...	...	...	...
18. Secondary energy delivered within province .....	-	-	-	-	-	-	-	...	...	...	...
19. Firm energy available within province (17 - 18) ..	34	57	63	71	79	88	101	115	125	149	160
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	34	57	63	71	79	88	101	115	125	149	160
22. Firm energy requirement on province (12 + 13 + 21)	34	57	63	71	79	88	101	115	125	149	160

TABLE 1B. Energy Supply and Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	514	651	674	632	549	710	...	...	...	...
2. Steam - Conventional)						(1,301	1,300	...	...	...	...
3. Nuclear )						(	-	...	...	...	...
4. Internal combustion )	..	966	911	966	1,162	(	-	...	...	...	...
5. Gas turbine )						(	-	...	...	...	...
6. Total net generation .....	..	1,480	1,562	1,640	1,794	1,850	2,010	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	16	-	-	-	-	-
8. United States .....	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	-	67	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	..	..	..	..	16	67	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	9	10	14	80	12	7	4	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	-	-	-	-	-	79	101	...	...	...	...
15. United States .....	-	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	-	9	10	14	80	91	108	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	1,471	1,552	1,626	1,714	1,775	1,969	...	...	...	...
18. Secondary energy delivered within province .....	..	-	-	-	-	-	4	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,027	1,471	1,552	1,626	1,714	1,775	1,965	2,090	2,218	2,349	2,490
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	1,027	1,471	1,552	1,626	1,714	1,775	1,965	2,090	2,218	2,349	2,490
22. Firm energy requirement on province (12 + 13 + 21)	1,033	1,480	1,562	1,640	1,794	1,787	1,972	2,094	2,218	2,349	2,490

TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	606	1,066	975	887	994	1,191	...	...	...	...
2. Steam - Conventional)						( 870	895	...	...	...	...
3. Nuclear )						( -	-	...	...	...	...
4. Internal combustion )	..	755	478	692	842	( 18	2	...	...	...	...
5. Gas turbine )						( -	-	...	...	...	...
6. Total net generation .....	..	1,361	1,544	1,667	1,729	1,882	2,088	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	31	28	27	24	26	27
8. United States .....	..	..	..	..	..	-	14	15	15	16	16
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	79	101	...	...	...	...
10. United States .....	..	..	..	..	..	14	3	...	...	...	...
11. Total receipts of energy .....	..	28	26	32	111	124	146	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	..	..	..	..	..	..	..	..	..	..	..
13. United States .....	41	29	63	51	58	125	166	165	191	213	119
(b) Secondary:											
14. Other provinces .....	..	..	..	..	..	16	67	...	...	...	...
15. United States .....	..	12	88	109	107	78	84	...	...	...	...
16. Total deliveries of energy .....	..	41	151	160	165	219	317	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	1,348	1,419	1,539	1,675	1,787	1,917	...	...	...	...
18. Secondary energy delivered within province .....	..	1	2	2	1	5	5	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,002	1,347	1,417	1,537	1,674	1,782	1,912	2,111	2,556	2,714	3,097
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	1,002	1,347	1,417	1,537	1,674	1,782	1,912	2,111	2,556	2,714	3,097
22. Firm energy requirement on province (12 + 13 + 21)	1,043	1,376	1,480	1,588	1,732	1,907	2,078	2,276	2,747	2,927	3,216

TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	37,802	43,340	44,418	50,000	49,432	49,799	...	...	...	...
2. Steam - Conventional)						( 276	288	...	...	...	...
3. Nuclear )						( -	-	...	...	...	...
4. Internal combustion )	..	185	189	209	273	( 7	13	...	...	...	...
5. Gas turbine )						( 11	29	...	...	...	...
6. Total net generation .....	..	37,987	43,529	44,627	50,273	49,726	50,129	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	87	110	140	90	90	90
8. United States .....	..	..	..	..	..	7	7	8	8	8	9
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	16	-	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	65	61	83	103	110	117	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	4,456	4,075	4,205	4,211	4,193	4,207	3,964	4,280	4,303	4,313	4,329
13. United States .....	490	485	490	492	496	353	14	15	15	16	17
(b) Secondary:											
14. Other provinces .....	..	876	1,785	1,415	1,723	1,649	1,963	...	...	...	...
15. United States .....	..	64	36	54	62	54	294	...	...	...	...
16. Total deliveries of energy .....	..	5,500	6,516	6,172	6,474	6,263	6,235	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	32,552	37,074	38,538	43,902	43,573	44,011	...	...	...	...
18. Secondary energy delivered within province .....	..	1,716	4,732	4,503	5,350	4,551	3,622	...	...	...	...
19. Firm energy available within province (17 - 18) ..	23,189	30,836	32,342	34,035	38,552	39,022	40,389	41,101	44,023	47,081	50,117
20. Indicated shortage .....	215	540	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	23,404	31,376	32,342	34,035	38,552	39,022	40,389	41,101	44,023	47,081	50,117
22. Firm energy requirement on province (12 + 13 + 21)	28,350	35,936	37,037	38,738	43,241	43,582	44,367	45,396	48,341	51,410	54,463

TABLE 1B. Energy Supply and Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	27,894	27,942	32,301	34,870	33,654	30,872	...	...	...	...
2. Steam - Conventional) .....						( 1,187	4,335	...	...	...	...
3. Nuclear ) .....						( -	22	...	...	...	...
4. Internal combustion ) .....	..	2,089	1,197	946	822	( 31	29	...	...	...	...
5. Gas turbine ) .....						( -	1	...	...	...	...
6. Total net generation .....	..	29,983	29,139	33,247	35,692	34,872	35,259	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	4,188	3,943	4,262	4,289	4,292	4,307
8. United States .....	..	..	..	..	..	..	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	1,649	2,009	...	...	...	...
10. United States .....	..	..	..	..	..	1,362	2,704	...	...	...	...
11. Total receipts of energy .....	..	5,375	6,232	6,094	6,182	7,199	8,656	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	3	4	5	5	6	7	7	23	24	25	26
13. United States .....	703	658	711	710	727	642	635	646	379	310	310
(b) Secondary:											
14. Other provinces .....	..	18	46	83	131	275	221	...	...	...	...
15. United States .....	..	3,524	2,746	3,154	4,043	2,909	2,875	...	...	...	...
16. Total deliveries of energy .....	..	4,204	3,508	3,952	4,907	3,833	3,738	...	...	...	...
17. Total energy available (6 + 11 - 16) ..	..	31,154	31,863	35,389	36,967	38,238	40,177	...	...	...	...
18. Secondary energy delivered within province .....	..	194	395	485	585	511	546	...	...	...	...
19. Firm energy available within province (17 - 18) ..	20,395	30,960	31,468	34,904	36,382	37,727	39,631	42,399	45,059	47,462	50,153
20. Indicated shortage .....	97	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	20,492	30,960	31,468	34,904	36,382	37,727	39,631	42,399	45,059	47,462	50,153
22. Firm energy requirement on province (12 + 13 + 21)	21,198	31,622	32,184	35,619	37,115	38,376	40,273	43,068	45,462	47,797	50,489



TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	3,333	3,082	3,582	3,735	3,591	4,220	...	...	...	...
2. Steam - Conventional)						(	238	...	...	...	...
3. Nuclear )						(	-	...	...	...	...
4. Internal combustion )	..	5	131	51	75	(	11	...	...	...	...
5. Gas turbine )						(	-	...	...	...	...
6. Total net generation .....	..	3,338	3,213	3,633	3,810	3,840	4,352	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	623	647	657	686	661	661
8. United States .....	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	301	199	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	571	620	652	739	924	846	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	79	136	-	-	-	2	29	-	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	18	43	3	4	4	46	...	...	...	...
15. United States .....	..	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	..	154	43	3	4	6	75	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	3,755	3,790	4,282	4,545	4,758	5,123	...	...	...	...
18. Secondary energy delivered within province .....	..	408	214	393	344	60	120	...	...	...	...
19. Firm energy available within province (17 - 18) ..	2,443	3,347	3,576	3,889	4,201	4,698	5,003	5,344	5,573	5,807	6,056
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	2,443	3,347	3,576	3,889	4,201	4,698	5,003	5,344	5,573	5,807	6,056
22. Firm energy requirement on province (12 + 13 + 21)	2,522	3,483	3,576	3,889	4,201	4,700	5,032	5,344	5,573	5,807	6,056

TABLE 1B. Energy Supply and Requirements

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	546	569	586	620	658	704	...	...	...	...
2. Steam - Conventional) .....								...	...	...	...
3. Nuclear ) .....						(1,682	1,844	...	...	...	...
4. Internal combustion ) .....	..	1,147	1,333	1,498	1,659	( 109	97	...	...	...	...
5. Gas turbine ) .....						( 62	37	...	...	...	...
6. Total net generation .....	..	1,693	1,902	2,084	2,279	2,511	2,682	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	-	29	-	-	-	-
8. United States .....	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	6	-	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	3	3	8	6	6	29	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	515	503	504	517	575	621	647	657	686	661	661
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	67	79	78	44	41	-	...	...	...	...
15. United States .....	..	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	..	570	583	595	619	662	647	...	...	...	...
17. Total energy available (6 + 11 - 16) ..	..	1,126	1,322	1,497	1,666	1,855	2,064	...	...	...	...
18. Secondary energy delivered within province .....	..	-	-	-	-	-	-	...	...	...	...
19. Firm energy available within province (17 - 18) ..	467	1,126	1,322	1,497	1,666	1,855	2,064	2,368	2,622	2,878	3,128
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20) ..	467	1,126	1,322	1,497	1,666	1,855	2,064	2,368	2,622	2,878	3,128
22. Firm energy requirement on province (12 + 13 + 21) ..	982	1,629	1,826	2,014	2,241	2,476	2,711	3,025	3,308	3,539	3,789

TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	807	991	842	887	1,023	956	...	...	...	...
2. Steam - Conventional )											
3. Nuclear )						(2,534	2,900	...	...	...	...
4. Internal combustion )	..	1,533	1,616	2,228	2,540	(	-	...	...	...	...
5. Gas turbine )						( 51	59	...	...	...	...
						( 165	187	...	...	...	...
6. Total net generation .....	..	2,340	2,607	3,070	3,427	3,773	4,102	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	6	23	12	10	8	6
8. United States .....	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	30	-	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	22	19	34	30	36	23	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	20	-	-	5	3	1	4	4	4	3	2
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	..	4	2	2	2	-	-	...	...	...	...
15. United States .....	..	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	..	4	2	7	5	1	4	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	2,358	2,624	3,097	3,452	3,808	4,121	...	...	...	...
18. Secondary energy delivered within province .....	..	-	-	-	-	-	-	...	...	...	...
19. Firm energy available within province (17 - 18) ..	1,114	2,358	2,624	3,097	3,452	3,808	4,121	4,520	4,970	5,422	5,927
20. Indicated shortage .....	..	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	1,114	2,358	2,624	3,097	3,452	3,808	4,121	4,520	4,970	5,422	5,927
22. Firm energy requirement on province (12 + 13 + 21)	1,134	2,358	2,624	3,102	3,455	3,809	4,125	4,524	4,974	5,425	5,929

TABLE 1B. Energy Supply and Requirements

	Actual						Forecast				
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	10,054	11,148	11,673	12,584	12,295	13,500	...	...	...	...
2. Steam - Conventional)						( 535	665	...	...	...	...
3. Nuclear )						( -	-	...	...	...	...
4. Internal combustion )	..	487	534	603	729	( 246	261	...	...	...	...
5. Gas turbine )						( 10	3	...	...	...	...
6. Total net generation .....	..	10,541	11,682	12,276	13,313	13,086	14,429	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	1	4	4	4	3	2
8. United States .....	..	..	..	..	..	1	1	1	1	1	1
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	-	-	...	...	...	...
10. United States .....	..	..	..	..	..	16	57	...	...	...	...
11. Total receipts of energy .....	..	545	18	30	72	18	62	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	9	6	6	3	6	23	12	10	8	6
13. United States .....	184	-	-	-	2	2	2	2	2	2	2
(b) Secondary:											
14. Other provinces .....	..	13	13	28	27	30	-	...	...	...	...
15. United States .....	..	13	13	14	16	17	14	...	...	...	...
16. Total deliveries of energy .....	..	35	32	48	48	55	39	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	11,051	11,668	12,258	13,337	13,049	14,452	...	...	...	...
18. Secondary energy delivered within province .....	..	90	89	167	233	242	230	...	...	...	...
19. Firm energy available within province (17 - 18) ..	4,741	10,961	11,579	12,091	13,104	12,807	14,222	15,095	16,116	16,893	17,520
20. Indicated shortage .....	-	14	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	4,741	10,975	11,579	12,091	13,104	12,807	14,222	15,095	16,116	16,893	17,520
22. Firm energy requirement on province (12 + 13 + 21)	4,925	10,984	11,585	12,097	13,109	12,815	14,247	15,109	16,128	16,903	17,528

	Actual							Forecast			
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
millions of kilowatt-hours											
Net generation by:											
1. Hydro-electric .....	..	112	131	146	152	174	187	...	...	...	...
2. Steam - Conventional )						( 2	2	...	...	...	...
3. Nuclear )						( -	-	...	...	...	...
4. Internal combustion )	..	14	15	21	14	( -	24	...	...	...	...
5. Gas turbine )						( 19	-	...	...	...	...
6. Total net generation .....	..	126	146	167	166	195	213	...	...	...	...
Receipts of energy from:											
(a) Firm:											
7. Other provinces .....	..	..	..	..	..	-	-	-	-	-	-
8. United States .....	..	..	..	..	..	-	-	-	-	-	-
(b) Secondary:											
9. Other provinces .....	..	..	..	..	..	-	-	...	...	...	...
10. United States .....	..	..	..	..	..	-	-	...	...	...	...
11. Total receipts of energy .....	..	..	..	..	..	-	-	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
12. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
13. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
14. Other provinces .....	-	-	-	-	-	-	-	...	...	...	...
15. United States .....	-	-	-	-	-	-	-	...	...	...	...
16. Total deliveries of energy .....	-	-	-	-	-	-	-	...	...	...	...
17. Total energy available (6 + 11 - 16)	..	126	146	167	166	195	213	...	...	...	...
18. Secondary energy delivered within province .....	..	12	28	26	28	42	51	...	...	...	...
19. Firm energy available within province (17 - 18) ..	64	114	118	141	138	153	162	162	167	169	172
20. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
21. Firm energy requirement within province (19 + 20)	64	114	118	141	138	153	162	162	167	169	172
22. Firm energy requirement on province (12 + 13 + 21)	64	114	118	141	138	153	162	162	167	169	172



TABLE 2. Total Net Generating Capability within Provinces(1)

Province	1951	1957	1958	1959	1960	1961	1962	Forecast				Percentage change (compounded)		
								1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
thousands of kilowatts														
Newfoundland (including Labrador) . . . .	200	249	271	267	309	311	409	506	508	512	526	6.70	10.82	6.50
Prince Edward Island . . . . .	18	25	26	25	38	37	37	59	59	59	59	6.75	9.22	12.25
Nova Scotia . . . . .	248 <sup>F</sup>	415	411	493	499	508	521	521	521	616	616	7.00	6.00	4.25
New Brunswick . . . . .	198 <sup>F</sup>	321	372	373	388	436	480	538	538	545	642	8.12	6.58	7.50
Quebec . . . . .	4,613	6,461	7,053	7,681	8,764	8,738	8,919	9,154	9,562	10,219	10,346	6.30	6.00	3.70
Ontario . . . . .	2,824	4,932	5,881	6,275	6,650	6,858	7,223	8,185	8,467	8,793	9,208	8.90	5.25	6.25
Manitoba . . . . .	423	639	734	734	932	905	1,033	1,034	1,244	1,349	1,350	8.46	8.90	6.90
Saskatchewan . . . . .	245	463	538	671	752	757	752	808	876	906	906	10.80	8.75	4.75
Alberta . . . . .	271	588 <sup>F</sup>	734	768	925	953	1,133	1,205	1,387	1,389	1,631	11.40	11.50	9.50
British Columbia . . . . .	1,015	2,350	2,568	2,877	3,028	3,070	3,307	3,432	3,592	3,596	3,686	11.30	6.50	2.75
Yukon and Northwest Territories . . . . .	21	26	40	41	55	55	55	56	57	58	58	9.10	8.28	1.25
Canada . . . . .	10,076	16,469	18,628	20,205	22,340	22,628	23,869	25,498	26,811	28,042	29,028	8.16	6.40	4.80

(1) Table 1A, item 6.

TABLE 3. Firm Power Peak Load within Provinces(1)

Province	1951	1957	1958	1959	1960	1961	1962	Forecast				Percentage change (compounded)		
								1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
thousands of kilowatts														
Newfoundland (including Labrador) .....	182	222	231	231	245	242	294	347	394	405	416	4.45	6.21	9.07
Prince Edward Island .....	8	14	16	19	21	24	25	28	30	33	36	10.70	11.80	9.55
Nova Scotia .....	185	322	335	330	356	347	388	409	431	458	484	6.95	3.75	5.70
New Brunswick .....	184	258	273	291	319	319	347	397	443	484	536	5.95	6.20	11.50
Quebec .....	3,462	5,256	5,375	5,466	5,871	6,258	6,370	6,836	7,249	7,750	8,244	5.71	4.33	6.65
Ontario .....	3,292	5,369	5,794	6,154	6,391	6,615	6,913	7,376	7,789	8,219	8,688	7.00	4.50	5.88
Manitoba .....	454	608	646	690	772	849	907	943	984	1,029	1,080	6.50	8.85	4.45
Saskatchewan .....	127	299	353	377	418	466	497	535	579	639	694	13.20	8.95	8.70
Alberta .....	220	476	580	649	714	836	882	969	1,063	1,160	1,275	13.45	11.05	9.65
British Columbia .....	861	1,821	1,935	1,963	2,123	2,368	2,317	2,504	2,661	2,777	2,958	9.40	4.60	6.30
Yukon and Northwest Territories .....	14	19	30	31	34	29	32	33	33	34	35	7.80	1.65	2.25
Canada .....	8,989	14,664	15,568	16,201	17,264	18,353	18,972	20,377	21,656	22,988	24,446	7.03	5.08	6.55

(1) Table 1A, item 14.

TABLE 4. Firm Energy Requirement within Provinces(1)

Province	1951	1957	1958	1959	1960	1961	1962	Forecast				Percentage change (compounded)		
								1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
millions of kilowatt hours														
Newfoundland (Including Labrador) . . . .	1,040	1,190	1,178	1,215	1,320	1,361	1,473	1,742	2,238	2,459	2,524	3.20	5.75	14.40
Prince Edward Island . . . . .	34	57	63	71	79	88	101	115	125	149	160	10.40	12.50	12.20
Nova Scotia . . . . .	1,027	1,471	1,552	1,626	1,714	1,775	1,965	2,090	2,218	2,349	2,490	6.00	6.00	6.10
New Brunswick . . . . .	1,002	1,347	1,417	1,537	1,674	1,782	1,912	2,111	2,556	2,714	3,097	6.05	7.75	12.80
Québec . . . . .	23,404	31,376	32,342	34,035	38,552	39,022	40,389	41,101	44,023	47,081	50,117	5.10	5.70	5.80
Ontario . . . . .	20,492	30,960	31,468	34,904	36,382	37,727	39,631	42,399	45,059	47,462	50,153	6.20	5.87	6.06
Manitoba . . . . .	2,443	3,347	3,576	3,889	4,201	4,698	5,003	5,344	5,573	5,807	6,056	6.70	8.75	4.90
Saskatchewan . . . . .	467	1,126	1,322	1,497	1,666	1,855	2,064	2,368	2,622	2,878	3,128	15.75	11.80	11.00
Alberta . . . . .	1,114	2,358	2,624	3,097	3,452	3,808	4,121	4,520	4,970	5,422	5,927	12.65	11.90	9.50
British Columbia . . . . .	4,741	10,975	11,579	12,091	13,104	12,807	14,222	15,095	16,116	16,893	17,520	10.50	5.10	5.35
Yukon and Northwest Territories . . . . .	64	114	118	141	138	153	162	162	167	169	172	10.80	8.25	1.50
Canada . . . . .	55,828	84,321	87,239	94,103	102,282	105,076	111,043	117,047	125,667	133,383	141,344	6.45	6.22	6.22

(1) Table 1B, item 21.

TABLE 5. Indicated Reserve(1)

Province	1951	1957	1958	1959	1960	1961	1962	Forecast				Percentage change (compounded)		
								1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
thousands of kilowatts														
Newfoundland (including Labrador):														
1. Gross capability .....	200	249	271	267	309	311	409	506	508	512	526	6.70	10.82	6.50
2. Firm power peak load on province ...	182	228	239	238	259	255	307	361	408	419	430	4.88	6.46	5.75
3. Indicated reserve (1 - 2) .....	18	21	32	29	50	56	102	145	100	93	96	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	9.9	9.2	13.4	12.2	19.3	22.0	33.2	40.1	24.5	22.2	22.3	...	...	...
Prince Edward Island:														
1. Gross capability .....	18	25	26	25	38	37	37	59	59	59	59	6.75	9.22	12.25
2. Firm power peak load on province ...	8	14	16	19	21	24	25	28	30	33	36	11.15	11.80	9.55
3. Indicated reserve (1 - 2) .....	10	11	10	6	17	13	12	31	29	26	23	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	125.0	78.6	62.5	31.6	81.0	54.2	48.0	110.7	96.6	78.8	63.9	...	...	...
Nova Scotia:														
1. Gross capability .....	248	415	411	493	499	508	521	521	521	616	616	7.00	6.00	4.25
2. Firm power peak load on province ...	189	324	338	333	359	348	389	410	431	458	484	6.78	3.58	5.51
3. Indicated reserve (1 - 2) .....	59	91	73	160	140	160	132	111	90	158	132	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	31.2	28.1	21.6	48.0	39.0	46.0	33.9	27.1	20.9	34.5	21.4	...	...	...
New Brunswick:														
1. Gross capability .....	200	326	380	380	395	442	488	546	548	553	651	8.45	6.45	7.47
2. Firm power peak load on province ...	188	266	282	300	342	341	375	422	472	514	552	6.48	7.38	10.15
3. Indicated reserve (1 - 2) .....	12	60	98	80	53	101	113	124	76	39	99	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	6.4	22.6	34.8	26.7	15.5	29.6	30.1	29.4	16.1	7.6	17.9	...	...	...

(1) Gross capability (Table 1A, items 6 + 9); firm power peak load on province (Table 1A, item 17); indicated reserve (Table 1A, item 18).

TABLE 5. Indicated Reserve(1) - Continued

Province	1951							1957							1962							Forecast				Percentage change (compounded)				
	1951							1957							1962							Forecast				Percentage change (compounded)				
thousands of kilowatts																														
<u>Quebec:</u>																														
1.	Gross capability .....	4,614	6,468	7,062	7,690	8,780	8,759	8,936	9,172	9,580	10,237	10,364	6.19	6.05	3.75															
2.	Firm power peak load on province ...	4,253 <sup>F</sup>	6,008	6,105	6,219	6,626	6,992	7,071	7,539	7,953	8,455	8,952	4.80	3.74	6.07															
3.	Indicated reserve (1 - 2) .....	361 <sup>F</sup>	460	957	1,471	2,154	1,767	1,865	1,633	1,627	1,782	1,412	...	...	...															
4.	Indicated reserve expressed as per cent of firm power peak load .....	8.5 <sup>F</sup>	7.7	15.7	23.7	32.5	25.3	26.4	21.7	20.5	21.1	15.8	...	...	...															
<u>Ontario:</u>																														
1.	Gross capability .....	3,568	5,637	6,549	6,967	7,344	7,553	7,915	8,879	9,159	9,486	9,902	7.50	4.85	5.75															
2.	Firm power peak load on province ...	3,697 <sup>F</sup>	5,456	5,881	6,242	6,479	6,706	7,004	7,467	7,827	8,257	8,726	5.98	4.47	5.51															
3.	Indicated reserve (1 - 2) .....	- 129 <sup>F</sup>	181	668	725	865	847	911	1,412	1,332	1,229	1,176	...	...	...															
4.	Indicated reserve expressed as a per cent of firm power peak load .....	...	3.3	11.4	11.6	13.4	12.6	13.0	18.9	17.0	14.9	13.5	...	...	...															
<u>Manitoba:</u>																														
1.	Gross capability .....	500	708	802	806	1,018	988	1,120	1,172	1,332	1,437	1,438	8.45	8.70	6.45															
2.	Firm power peak load on province ...	463	622	646	690	772	849	907	943	984	1,029	1,080	6.30	8.85	4.46															
3.	Indicated reserve (1 - 2) .....	37	86	156	116	246	139	213	229	348	408	358	...	...	...															
4.	Indicated reserve expressed as a per cent of firm power peak load .....	8.0	13.8	24.1	16.8	31.9	16.4	23.5	24.3	35.4	37.5	33.1	...	...	...															
<u>Saskatchewan:</u>																														
1.	Gross capability .....	245	463	539	672	753	757	752	808	876	906	906	10.80	8.70	4.75															
2.	Firm power peak load on province ...	204	368	421	449	504	554	584	673	667	727	782	10.03	8.52	7.51															
3.	Indicated reserve (1 - 2) .....	41	95	118	223	249	203	168	135	209	179	124	...	...	...															
4.	Indicated reserve expressed as a per cent of firm power peak load .....	20.1	25.8	28.0	49.7	49.4	36.6	28.8	20.1	31.3	24.6	15.9	...	...	...															

(1) Gross capability (Table 1A, items 6 + 9); firm power peak load on province (Table 1A, item 17); indicated reserve (Table 1A, item 18).



TABLE 5. Indicated Reserve(1) - Concluded

Province	1951	1957	1958	1959	1960	1961	1962	Forecast				Percentage change (compounded)		
								1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
thousands of kilowatts														
Alberta:														
1. Gross capability .....	271	592	738	771	928	953	1,133	1,205	1,387	1,389	1,631	13.90	11.30	9.50
2. Firm power peak load on provinces ..	225	476	581	650	715	841	886	975	1,070	1,167	1,282	13.30	11.15	9.70
3. Indicated reserve (1 - 2) .....	46	116	157	121	213	112	247	230	317	222	349	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	20.4	24.4	27.0	18.6	29.8	13.3	27.9	23.6	29.6	19.0	27.2	...	...	...
British Columbia:														
1. Gross capability .....	1,020	2,350	2,568	2,877	3,028	3,075	3,311	3,438	3,599	3,605	3,696	11.30	6.55	2.80
2. Firm power peak load on province ...	891	1,825	1,939	1,966	2,126	2,368	2,317	2,504	2,661	2,778	2,962	9.10	4.51	6.33
3. Indicated reserve (1 - 2) .....	129	525	629	911	902	707	994	934	938	827	734	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	14.5	28.8	32.4	46.3	42.4	29.9	42.9	37.3	35.2	29.8	24.8	...	...	...
Yukon and Northwest Territories:														
1. Gross capability .....	21	26	40	41	55	55	55	56	57	58	58	9.10	8.28	1.25
2. Firm power peak load on province ...	14	19	30	31	34	29	32	33	33	34	35	7.80	1.51	2.17
3. Indicated reserve (1 - 2) .....	7	7	10	10	21	26	23	23	24	24	23	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	50.0	36.8	33.3	32.3	61.8	89.7	71.9	69.7	72.7	70.6	65.7	...	...	...
Canada:														
1. Gross capability .....	10,905 <sup>F</sup>	16,469	18,628	20,205	22,340	22,630	24,677	26,362	27,626	28,858	29,847	7.70	7.30	6.55
2. Firm power peak load on Canada .....	10,314 <sup>F</sup>	14,816	15,720	16,353	17,430	18,499	19,093	20,495	21,725	23,059	24,506	5.78	5.00	6.01
3. Indicated reserve (1 - 2) .....	591	1,653	2,908	3,852	4,910	4,131	4,979	5,007	5,090	4,987	4,526	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	6.2	11.2	18.5	23.5	28.2	22.3	26.1	24.4	23.4	21.2	18.8	...	...	...
(1) Gross capability (Table 1A, items 6 + 9); firm power peak load on province (Table 1A, item 17); indicated reserve (Table 1A, item 18).														

(1) Gross capability (Table 1A, items 6 + 9); firm power peak load on province (Table 1A, item 17); indicated reserve (Table 1A, item 18).

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.













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# ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1963 Actual

1964 - 1968 Forecast



DOMINION BUREAU OF STATISTICS



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Industry Division

Energy Statistics Section

ANNUAL ELECTRIC POWER SURVEY  
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## TABLE OF CONTENTS

	Page
Introduction .....	5

### CHARTS

A. Total Generating Capability within Canada .....	8
This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	
B. Net Capability and Peak Loads within Canada .....	9
This chart provides an indication of the reserves available to meet firm demand for electric power within Canada.	
C. Net Generating Capability within Provinces .....	10
This chart illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.	
D. Net Capability and Firm Demand within Provinces .....	12
This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.	
E. Firm Energy Requirement within Canada .....	14
This chart shows the growth in Canadian firm energy requirement during the period 1951-1968.	

### TABLES

F. <u>Capability, Firm Power Peak Load and Energy Requirements</u> .....	16
This table summarizes capability, firm power peak load, indicated reserve, generation, interprovincial receipts and deliveries, secondary energy and firm energy requirements.	
G. <u>Total Net Generating Capability within Provinces</u> .....	40
This table compares provincial rates of growth in net generating capability.	
H. <u>Firm Power Peak Load within Provinces</u> .....	41
This table compares rates of growth of firm power peak load within provinces.	
I. <u>Firm Energy Requirement within Provinces</u> .....	42
This table compares rates of growth of firm energy requirement within provinces.	
J. <u>Indicated Reserve</u> .....	43
This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	
K. Glossary of Terms .....	46

### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

r Revised figures.

.. Figures not available.

... Figures not appropriate or not applicable.

- Nil or zero.

## INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1964. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions. The forecast period for this report has been extended to a five year period as compared with four in previous years.

There are approximately 150 responding firms in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.6 per cent of all generation, and all the imports and exports. The utilities group contributes approximately 80 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable.

## Review of Survey Results

Total net generating capability in 1963 for firms which generate over 10 million kw. per year increased 1,609,000 kw. or 6.74 per cent to 25,478,000 kw. The forecast years, 1964-1968, indicate an anticipated growth of 7,160,000 kw., or a compound growth rate of 6.39 per cent as compared with the 1951-1963 growth rate of 8.04 per cent. Thermal capability is expected to grow at the rate of 9.5 per cent in the forecast period compared with 15.5 per cent in the previous twelve-year period, while hydro-electric capability is expected to increase at 3.6 per cent compared with 6.7 per cent in the previous twelve years. The hydro-electric capability forecast figures do not include the Hamilton Falls development in Labrador as the plans for this project are indefinite. Most of the thermal capability growth will be in steam plants. There will be small increases in the thermal capability of gas turbine and internal combustion plants.

The first nuclear firm capability is now forecast for 1967.

In 1962 it was forecast that the net generating capability in 1963 would be 25,498,000 kw. The actual 1963 net generating capability fell short of this estimate by only 20,000 kw. The 1962 forecast for 1963 generating capability was approximately realized in all provinces except Ontario, which was significantly under the forecast, and Quebec, which was significantly over the forecast.

The largest absolute growths in generating capability for the forecast years are indicated for Quebec - 2,323,000 kw., Ontario - 2,199,000 kw., Alberta - 790,000 kw., and British Columbia - 769,000 kw. Whereas Quebec will meet the increased generating capability by adding 2,014,000 kw. in hydro capability and 309,000 kw. in thermal capability, Ontario plans to increase its capability by adding 1,915,000 kw. in thermal capability, including 218,000 kw. nuclear, and 284,000 kw. hydro. Alberta plans to add 490,000 kw. in thermal capability and 300,000 kw. in hydro capability. British Columbia estimates increases of 424,000 kw. and 345,000 kw. in hydro and thermal capability respectively.

The firm power peak loads have not shown the same change in rate of growth as generating capability. In the period from 1951 to 1963 the growth rate of firm power peak loads in Canada was 7.2 per cent while the forecast rate of growth from 1964 to 1968 is 6.0 per cent. As a result, the indicated reserve is expected to vary slightly during the forecast years from 4,573,000 kw. in 1963 to a

low of 4,369,000 kw. in 1964 and a high of 4,663,000 KW in 1968. The indicated reserve, stated as a percentage of firm power peak load, is forecast to decline steadily from 21.9 per cent in 1963 to 16.4 per cent in 1967 and then rise to 16.7 per cent in 1968.

Indicated reserve data does not take into account reduction in generating capability due to adverse flow conditions such as ice, low water etc., which occur during the peak load season. In 1963, this reduction in generating capability amounted to about 780,000 kw. with Quebec accounting for 55.8 per cent, Ontario 41.2 per cent, Newfoundland 1.8 per cent, Saskatchewan 0.9 per cent and British Columbia 0.3 per cent.

Firm energy requirements increased 5.6 per cent from 111,043 million kw. in 1962 to 117,254 million kw. in 1963 compared with a growth of 6.4 per cent in the previous twelve year period and a forecast growth rate of 6.1 per cent for the period 1964-1968. The additional firm energy requirement was supplied by an increase in net generation of 4,611 million kw., a drop in net exports of 565 million kw. and a smaller amount of secondary energy delivered within Canada. This decrease amounted to 1,035 million kw.

### Concepts and Definitions

Table 1. Capability, Firm Power Peak Load and Energy Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. However, more detail has been provided in the generating capability which is now broken down to identify conventional steam, nuclear steam, internal combustion, and gas turbine equipment. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may be equal to, or smaller than, the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plate capacity; the impossibility of placing all pieces of equipment on the line at the same time, low water ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1 of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sum of the actual peak loads regardless of time of occurrence) and may be equal to, or greater than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty-five major systems serving Canada, seven had peak loads on December 16, four on December 17, eighteen on other dates between November 30 and December 31 and six outside this period.

Receipts and deliveries of firm power used in calculating net capability are the inter-provincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.



Indicated shortages are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1963, are subdivided by type of generation. No forecasts of generation are given for 1964-68.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts or obligations.

Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

Indicated shortage is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

CHART-A

# TOTAL GENERATING CAPABILITY WITHIN CANADA 1951-1968

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS

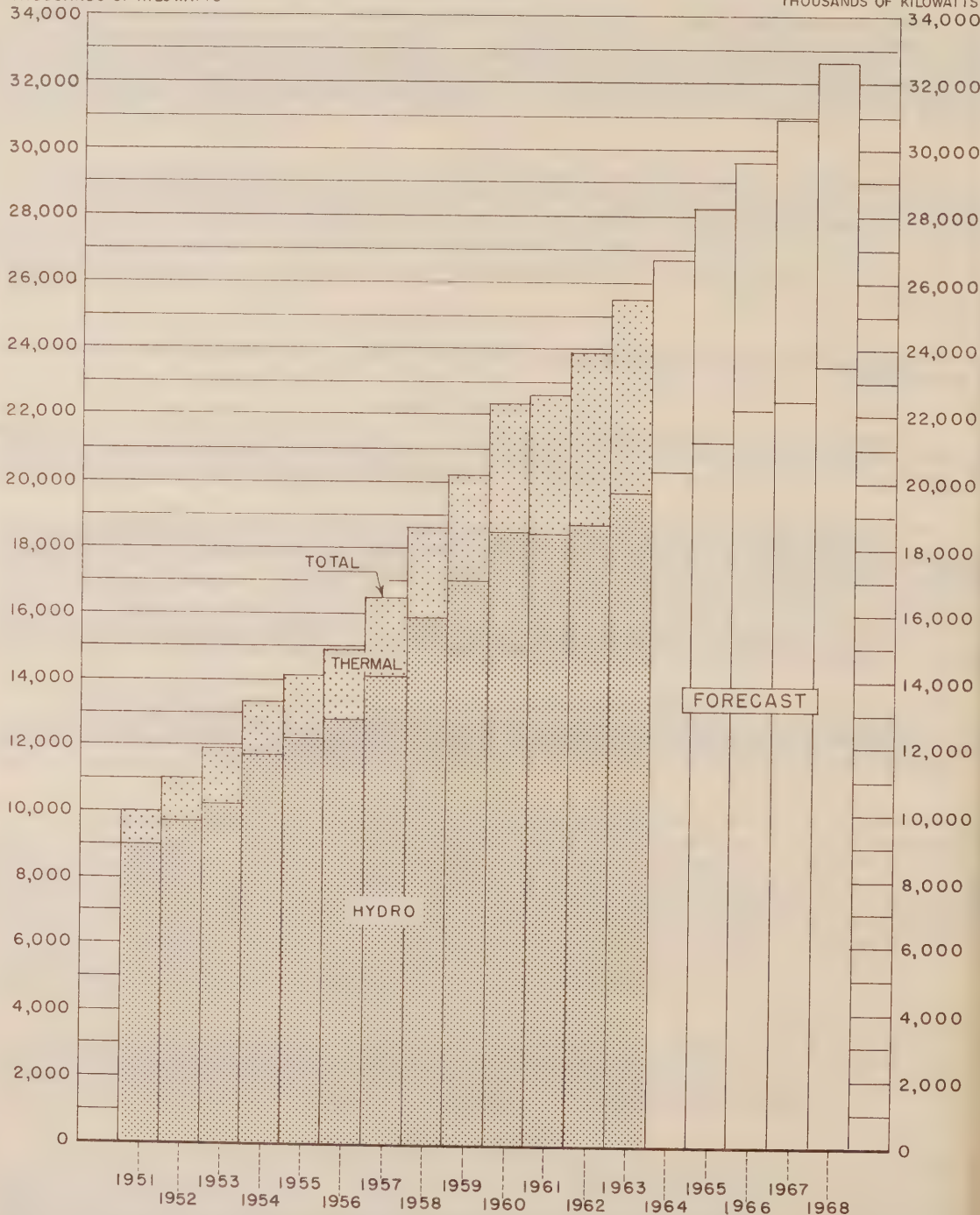
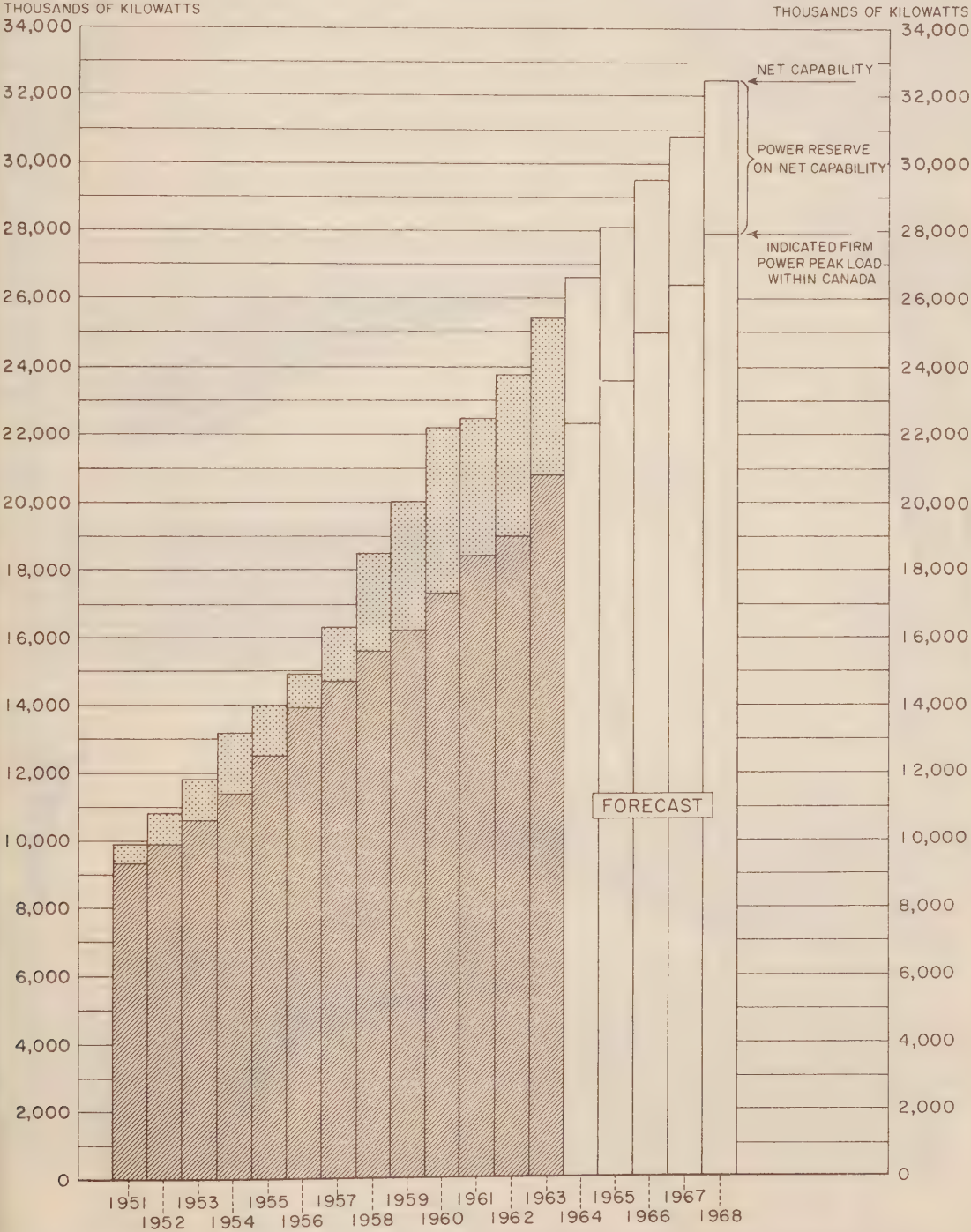


CHART - B

# NET CAPABILITY AND PEAK LOADS WITHIN CANADA 1951 - 1968



# NET GENERATING CAPABILITY WITHIN PROVINCES

1951-1968

THOUSANDS OF KILOWATTS 900 800 700 600 500 400 300 200 100 0

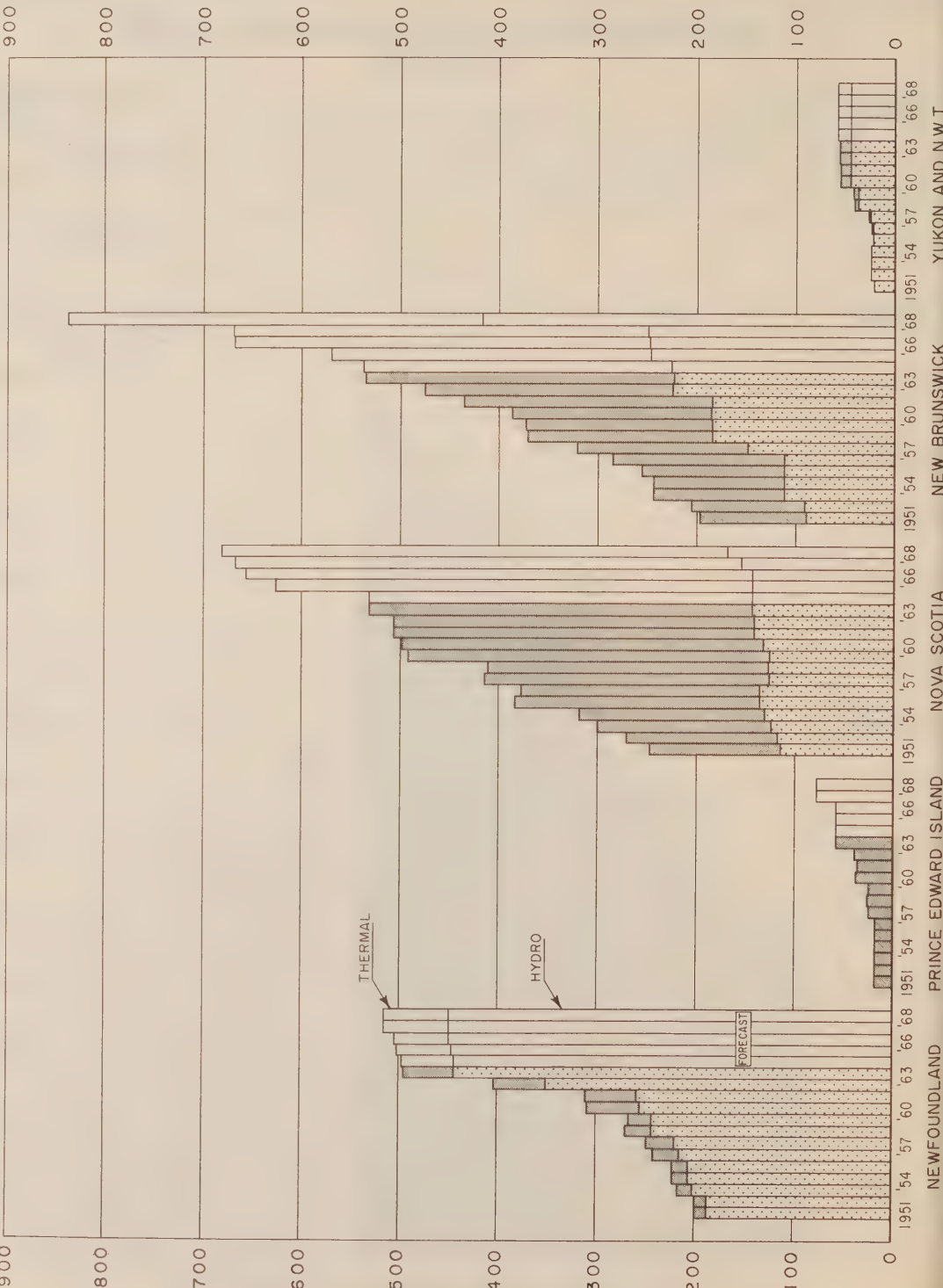




CHART - C

# NET GENERATING CAPABILITY WITHIN PROVINCES 1951 - 1968

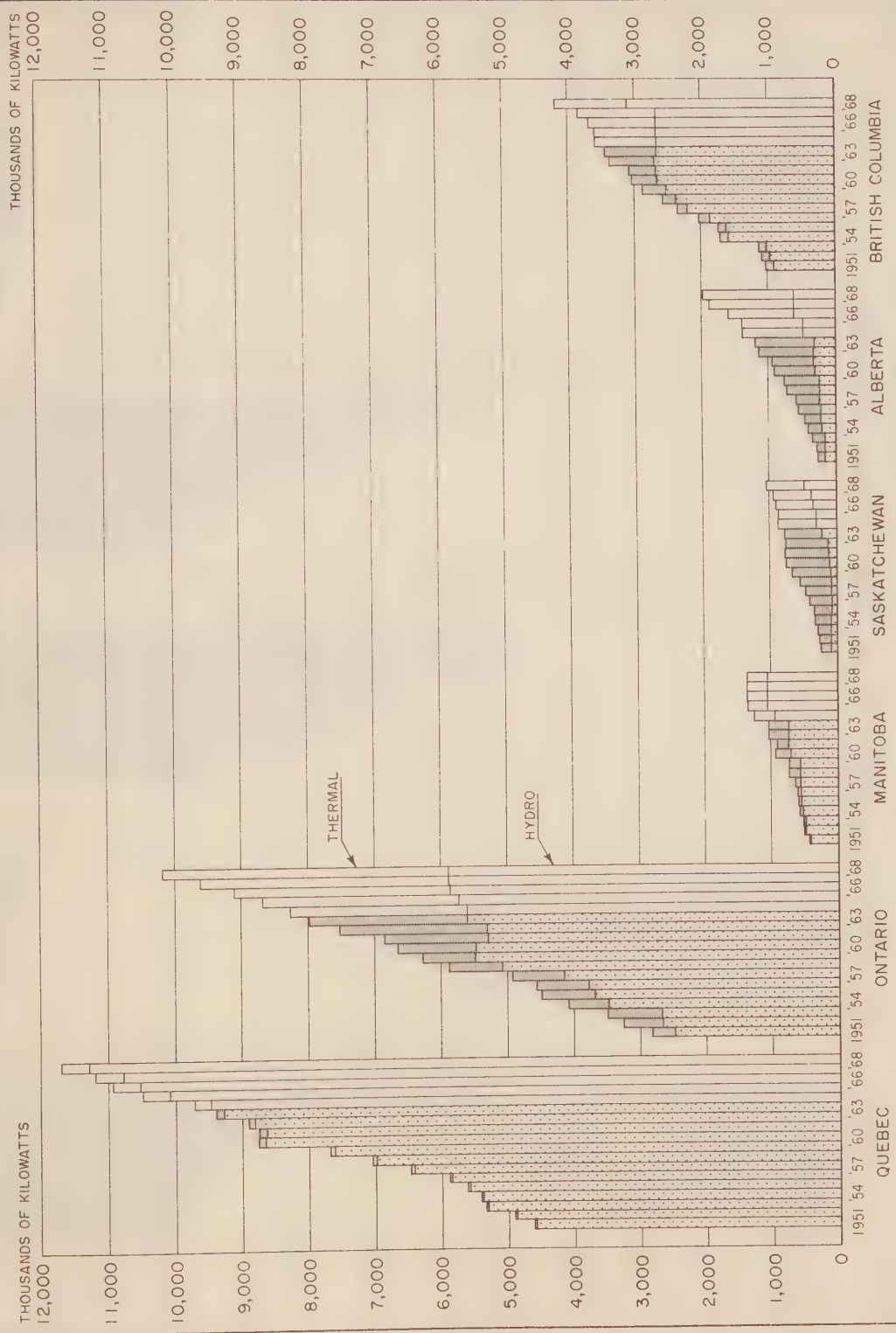
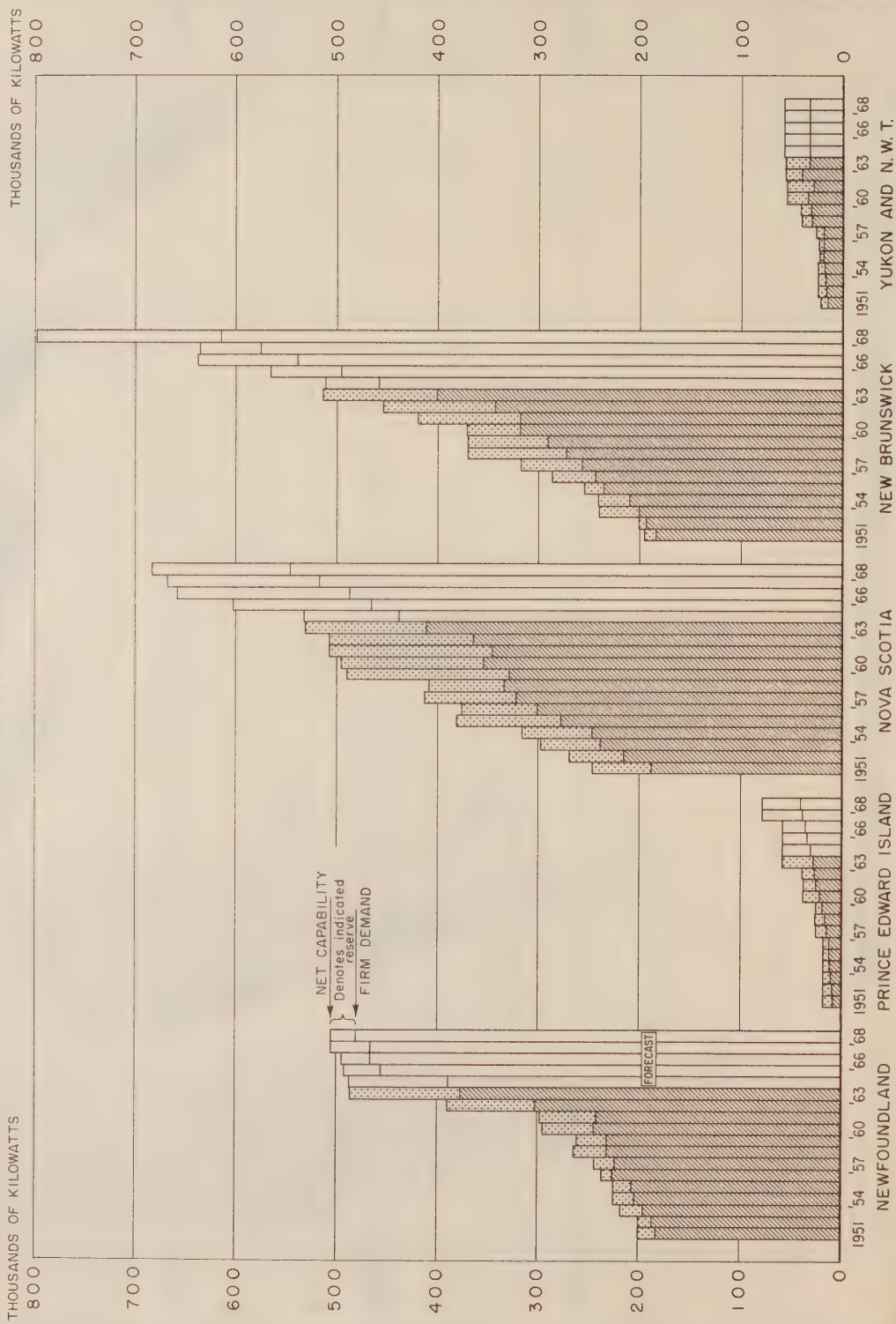




CHART-D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1951 — 1968



## NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1951 - 1968

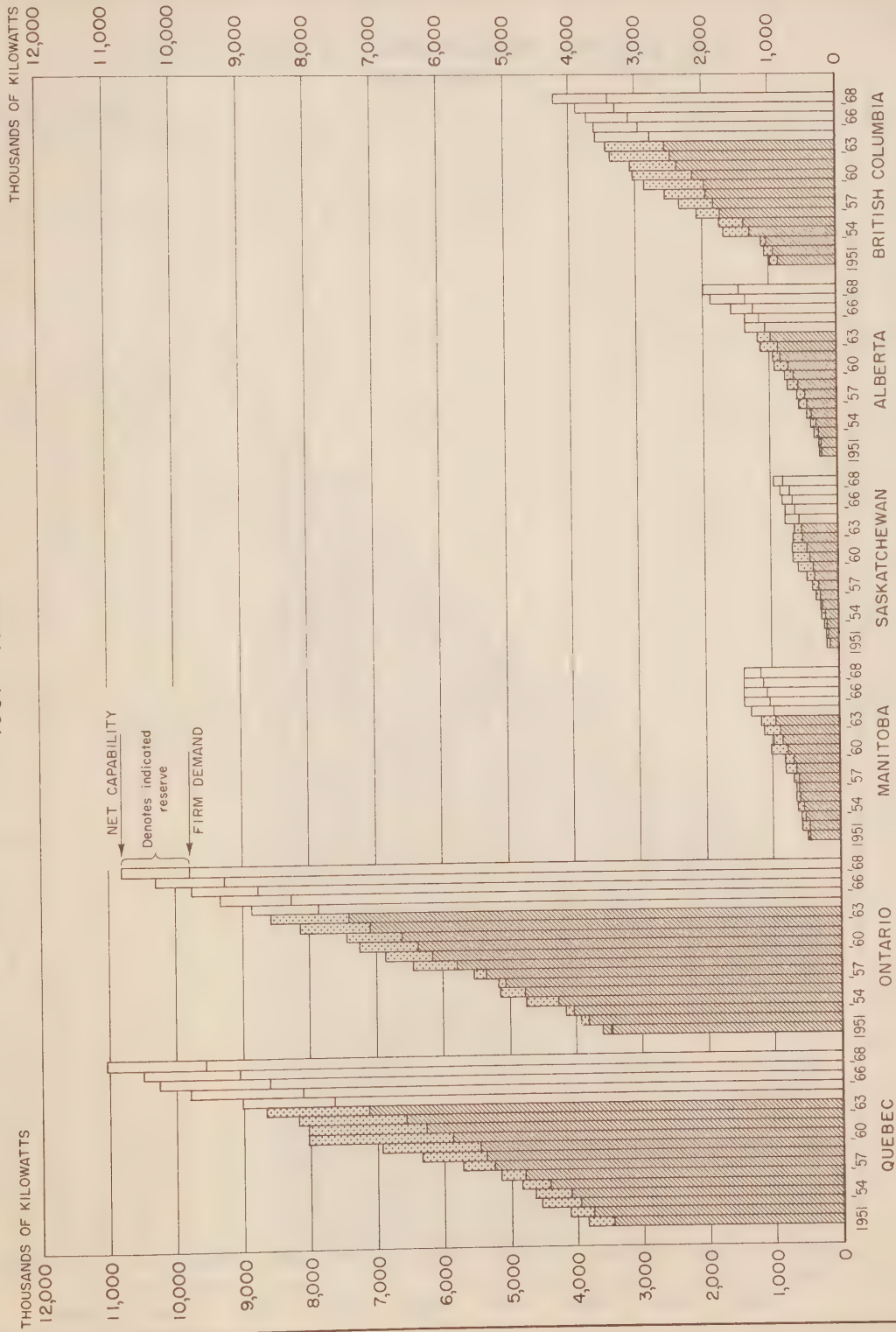
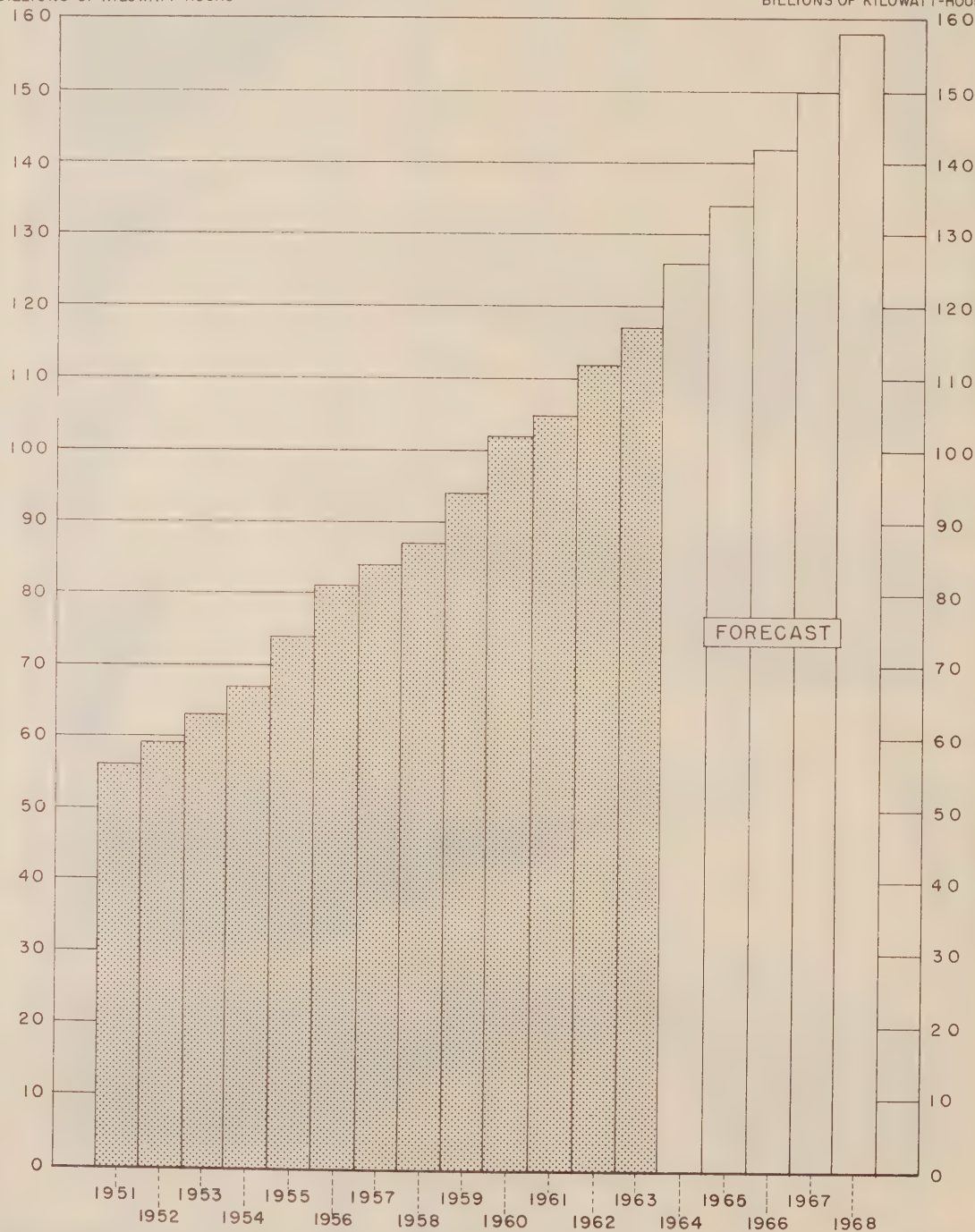


CHART-E

# FIRM ENERGY REQUIREMENT WITHIN CANADA 1951-1968

BILLIONS OF KILOWATT-HOURS

BILLIONS OF KILOWATT-HOURS







Canada

TABLE 1. Capacity, Firm Power Peak Load, and Energy Requirements

Capability and peak load							Actual					Forecast					
							1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
							thousands of kilowatts										
Capacity:																	
Net generating capability:																	
1.	Hydro-electric .....	9,044	17,086	18,516	18,389	18,651	19,666	20,319	21,211	22,058	22,378	23,496					
2.	Steam - Conventional)			( 3,648	4,596	5,194	5,813	6,356	6,856	7,623	8,251	8,251					
3.	Nuclear )	1,032	3,119	3,824	( -	-	-	-	-	-	218	218					
4.	Internal combustion )			( 240	251	236	244	250	254	256	258	258					
5.	Gas turbine )			( 351	371	382	383	384	384	384	415	415					
6.	Total net generating capability	10,076	20,205	22,340	22,628	23,869	25,478	26,759	28,201	29,552	30,860	32,638					
Receipts of firm power from:																	
7.	Other provinces .....	...	...	...	...	...	...	...	...	...	...	...					
8.	United States .....	-	-	-	2	4	2	2	3	3	3	3					
9.	Total receipts .....	-	-	-	2	4	2	2	3	3	3	3					
Deliveries of firm power to:																	
10.	Other provinces .....	...	...	...	...	...	...	...	...	...	...	...					
11.	United States .....	175	152	166	146	121	122	127	90	91	97	101					
12.	Total deliveries .....	175	152	166	146	121	122	127	90	91	97	101					
13.	Total net capability (6 + 9 - 12) .....	9,901	20,053	22,174	22,484	23,752	25,358	26,634	28,114	29,464	30,766	32,540					
Peak loads:																	
14.	Firm power peak load within Canada .....	8,989	16,201	17,264	18,353	18,972	20,757	22,265	23,605	24,953	26,338	27,789					
15.	Indicated shortages .....	321	-	-	-	-	28	-	28	70	86	88					
16.	Total indicated firm power peak load within Canada (14 + 15) .....	9,310	16,201	17,264	18,353	18,972	20,785	22,265	23,633	25,023	26,424	27,877					
17.	Firm power peak load on Canada (12 + 16)	9,485	16,353	17,430	18,499	19,093	20,907	22,392	23,723	25,114	26,521	27,978					
Indicated reserve:																	
18.	Indicated reserve (13 - 16) .....	591	3,852	4,910	4,131	4,780	4,573	4,369	4,481	4,441	4,342	4,663					



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual					Forecast						
	1951	1955	1960	1961	1962	1963	1964	1965	1966	1967	1968	
millions of kilowatt-hours												
Net generation by:												
19. Hydro-electric .....	..	96,517	105,770	103,692	103,695	103,539	...	...	...	...	...	
20. Steam - Conventional) .....			(	8,822	12,543	17,111	...	...	...	...	...	
21. Nuclear ) .....			(	-	22	87	...	...	...	...	...	
22. Internal combustion ) .....	..	7,339	8,271	(	509	514	593	...	...	...	...	
23. Gas turbine ) .....			(	248	257	312	...	...	...	...	...	
24. Total net generation .....	..	103,856	114,041	113,271	117,031	121,642	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...	
26. United States .....	..	..	..	8	22	12	12	12	12	12	12	
(b) Secondary:												
27. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...	
28. United States .....	..	..	..	1,392	2,764	2,867	...	...	...	...	...	
29. Total receipts of energy .....	..	515	367	1,400	2,786	2,879	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...	
31. United States .....	1,418	1,253	1,283	1,122	817	858	858	702	644	671	698	
(b) Secondary:												
32. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...	
33. United States .....	..	3,331	4,228	3,059	3,267	2,754	...	...	...	...	...	
34. Total deliveries of energy .....	..	4,584	5,511	4,180	4,084	3,612	...	...	...	...	...	
35. Total energy available (24 + 29 - 34) ..	..	99,787	108,897	110,491	115,733	120,909	...	...	...	...	...	
Secondary energy delivered within Canada .....												
36. Secondary energy delivered within Canada .....	..	5,684	6,615	5,415	4,690	3,655	...	...	...	...	...	
37. Firm energy available within Canada (35 - 36) ....	55,516	94,103	102,282	105,076	111,043	117,254	125,534	134,113	141,667	149,688	157,923	
38. Indicated shortage .....	312	-	-	-	-	-	-	-	-	-	-	
39. Firm energy requirement within Canada (37 + 38) ..	55,828	94,103	102,282	105,076	111,043	117,254	125,534	134,113	141,667	149,688	157,923	
40. Firm energy requirement on Canada (30 + 31 + 39) ..	57,246	95,356	103,565	106,198	111,860 <sup>F</sup>	118,112	126,392	134,815	142,311	150,359	158,621	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Newfoundland	Actual						Forecast			
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967
Capability and peak load	thousands of kilowatts									
<u>Capability:</u>										
Net generating capability:										
1. Hydro-electric .....	188	243	255	258	350	444	444	447	449	449
2. Steam - Conventional )				( 40	45	45	45	45	55	55
3. Nuclear ) .....	12	24	54	(	-	-	-	-	-	-
4. Internal combustion )				( 13	14	7	8	10	10	11
5. Gas turbine )				(	-	-	-	-	-	-
6. Total net generating capability	200	267	309	311	409	496	497	502	504	515
Receipts of firm power from:										
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:										
10. Other provinces .....	-	7	14	13	13	10	10	10	10	10
11. United States .....	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	7	14	13	13	10	10	10	10	10
13. Total net capability (6 + 9 - 12) .....	200	260	295	298	396	486	487	492	494	505
<u>Peak loads:</u>										
14. Firm power peak load within province .....	182	231	245	242	294	349	389	456	456	481
15. Indicated shortages .....	-	-	-	-	-	28	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	182	231	245	242	294	377	389	456	466	481
17. Firm power peak load on province (12 + 16)	182	238	259	255	307	387	399	466	476	491
<u>Indicated reserve:</u>										
18. Indicated reserve (13 - 16) .....	18	29	50	56	102	109	98	36	28	24

Energy	Actual						Forecast				
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	1,320	1,403	1,322	1,556	1,930	...	...	...	...	...
20. Steam - Conventional)				(	116	101	96	...	...	...	...
21. Nuclear )				(	-	-	-	...	...	...	...
22. Internal combustion )	..	54	76	(	10	9	8	...	...	...	...
23. Gas turbine )				(	-	-	-	...	...	...	...
24. Total net generation .....	..	1,374	1,479	1,448	1,666	2,034	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	..	-	-	-	-	-	-	-	-
26. United States .....	..	..	..	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	..	..	-	-	-	...	...	...	...	...
28. United States .....	..	..	..	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	..	..	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	-	33	49	80	81	36	36	36	36	36	36
31. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	18	36	3	-	37	...	...	...	...	...
33. United States .....	..	..	..	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	51	85	83	81	73	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	1,323	1,394	1,365	1,585	1,961	...	...	...	...	...
36. Secondary energy delivered within province .....	..	108	74	4	112	83	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	1,040	1,215	1,320	1,361	1,473	1,878	1,927	2,156	2,206	2,241	2,293
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	1,040	1,215	1,320	1,361	1,473	1,878	1,927	2,156	2,206	2,241	2,293
40. Firm energy requirement on province (30 + 31 + 39)	1,040	1,248	1,369	1,441	1,554	1,914	1,963	2,192	2,242	2,277	2,329

Prince Edward Island  
TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load											Forecast			
Actual														
1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	thousands of kilowatts			
Capability:														
Net generating capability:														
1.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.				( 32	32	51	51	51	51	71	71	-	-	-
3.	18	25	38	(	-	-	-	-	-	-	-	-	-	-
4.				( 5	5	7	7	7	7	7	7	-	-	-
5.				(	-	-	-	-	-	-	-	-	-	-
6.	18	25	38	37	37	58	58	58	58	78	78	-	-	-
Receipts of firm power from:														
7.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:														
10.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.	18	25	38	37	37	58	58	58	58	78	78	-	-	-
Peak loads:														
14.	8	19	21	24	25	27	30	33	35	38	40	-	-	-
15.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.	8	19	21	24	25	27	30	33	35	38	40	-	-	-
17.	8	19	21	24	25	27	30	33	35	38	40	-	-	-
Indicated reserve:														
18.	10	6	17	13	12	31	28	25	23	40	38	-	-	-

Energy	Actual						Forecast			
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967 1968
	millions of kilowatt-hours									
Net generation by:										
19. Hydro-electric .....	..	-	-	-	-	-	...	...	...	...
20. Steam - Conventional )				( 81	93	102	...	...	...	...
21. Nuclear )		71	79	( -	-	-	...	...	...	...
22. Internal combustion )				( 7	8	9	...	...	...	...
23. Gas turbine )				( -	-	-	...	...	...	...
24. Total net generation .....	..	71	79	88	101	111	...	...	...	...
Receipts of energy from:										
(a) Firm:										
25. Other provinces .....	..	..	..	-	-	-	-	-	-	-
26. United States .....	..	..	..	-	-	-	-	-	-	-
(b) Secondary:										
27. Other provinces .....	..	..	..	-	-	-	...	...	...	...
28. United States .....	..	..	..	-	-	-	...	...	...	...
29. Total receipts of energy .....	..	..	..	-	-	-	...	...	...	...
Deliveries of energy to:										
(a) Firm:										
30. Other provinces .....	-	-	-	-	-	-	-	-	-	-
31. United States .....	-	-	-	-	-	-	-	-	-	-
(b) Secondary:										
32. Other provinces .....	-	-	-	-	-	-	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...
34. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	71	79	88	101	111	...	...	...	...
36. Secondary energy delivered within province .....	-	-	-	-	-	-	...	...	...	...
37. Firm energy available within province (35 - 36) ..	34	71	79	88	101	111	120	129	138	147 158
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	34	71	79	88	101	111	120	129	138	147 158
40. Firm energy requirement on province (30 + 31 + 39)	34	71	79	88	101	111	120	129	138	147 158



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load		Actual						Forecast					
		1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	
		thousands of kilowatts											
Capability:													
Net generating capability:													
1.	Hydro-electric .....	114	126	132	141	141	143	143	143	143	154	169	
2.	Steam - Conventional)				( 365	378	387	387	482	512	512	512	
3.	Nuclear ) .....	134	367	367	(	-	-	-	-	-	-	-	
4.	Internal combustion )				( 2	2	2	2	2	2	2	2	
5.	Gas turbine )				(	-	-	-	-	-	-	-	
6.	Total net generating capability	248	493	499	508	521	532	532	627	657	668	683	
Receipts of firm power from:													
7.	Other provinces .....	-	-	-	-	-	-	-	-	-	-	-	
8.	United States .....	-	-	-	-	-	-	-	-	-	-	-	
9.	Total receipts .....	-	-	-	-	-	-	-	-	-	-	-	
Deliveries of firm power to:													
10.	Other provinces .....	2	3	3	1	1	1	-	25	-	-	-	
11.	United States .....	-	-	-	-	-	-	-	-	-	-	-	
12.	Total deliveries .....	2	3	3	1	1	1	-	25	-	-	-	
13.	Total net capability (6 + 9 - 12) .....	246	490	496	507	520	531	532	602	657	668	683	
Peak loads:													
14.	Firm power peak load within province .....	185	330	356	347	388	411	438	456	488	517	547	
15.	Indicated shortages .....	2	-	-	-	-	-	-	-	-	-	-	
16.	Total indicated firm power peak load within province (14 + 15) .....	187	330	356	347	388	411	438	466	488	517	547	
17.	Firm power peak load on province (12 + 16)	189	333	359	348	389	412	438	491	488	517	547	
Indicated reserve:													
18.	Indicated reserve (13 - 16) .....	59	160	140	160	132	120	94	136	169	151	136	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual					Forecast						
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	
millions of kilowatt-hours												
Net generation by:												
19. Hydro-electric .....	..	674	632	549	710	799	...	...	...	...	...	
20. Steam - Conventional)				( 1,301	1,300	1,313	...	...	...	...	...	
21. Nuclear )				(	-	-	...	...	...	...	...	
22. Internal combustion )	..	966	1,162	(	-	-	...	...	...	...	...	
23. Gas turbine )				(	-	-	...	...	...	...	...	
24. Total net generation .....	..	1,640	1,794	1,850	2,010	2,112	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	..	16	-	-	-	-	-	-	-	
26. United States .....	..	..	..	-	-	-	-	-	-	-	-	
(b) Secondary:												
27. Other provinces .....	..	..	..	-	67	57	...	...	...	...	...	
28. United States .....	..	..	..	-	-	-	...	...	...	...	...	
29. Total receipts of energy .....	..	..	..	16	67	57	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	-	14	80	12	7	8	7	186	-	-	-	
31. United States .....	-	-	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
32. Other provinces .....	-	-	-	79	101	60	...	...	...	...	...	
33. United States .....	-	-	-	-	-	-	...	...	...	...	...	
34. Total deliveries of energy .....	-	14	80	91	108	68	...	...	...	...	...	
35. Total energy available (24 + 29 - 34)	..	1,626	1,714	1,775	1,969	2,101	...	...	...	...	...	
36. Secondary energy delivered within province .....	..	-	-	-	4	1	...	...	...	...	...	
37. Firm energy available within province (35 - 36) ..	1,027	1,626	1,714	1,775	1,965	2,100	2,212	2,345	2,519	2,662	2,769	
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-	
39. Firm energy requirement within province (37 + 38)	1,027	1,626	1,714	1,775	1,965	2,100	2,212	2,345	2,519	2,662	2,769	
40. Firm energy requirement on province (30 + 31 + 39)	1,033	1,640	1,794	1,787	1,972	2,108	2,219	2,531	2,519	2,662	2,769	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

New Brunswick

Capability and peak load	Actual						Forecast			
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1968
	thousands of kilowatts									
<b>Capability:</b>										
Net generating capability:										
1. Hydro-electric .....	90	185	186	185	233	224	226	247	248	417
2. Steam - Conventional)				( 243	240	304	304	316	413	413
3. Nuclear )				( -	-	-	-	-	-	-
4. Internal combustion )	108	188	202	( -	7	7	7	7	7	7
5. Gas turbine )				( -	-	-	-	-	-	-
6. Total net generating capability	198	373	388	436	480	535	537	570	668	837
<b>Receipts of firm power from:</b>										
7. Other provinces .....	2	7	7	6	6	5	5	31	6	7
8. United States .....	-	-	-	-	2	2	2	3	3	3
9. Total receipts .....	2	7	7	6	8	7	7	34	9	10
<b>Deliveries of firm power to:</b>										
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-
11. United States .....	4	9	23	22	28	28	33	39	40	48
12. Total deliveries .....	4	9	23	22	28	28	33	39	40	48
13. Total net capability (6 + 9 - 12) .....	196	371	372	420	460	514	511	565	637	799
<b>Peak loads:</b>										
14. Firm power peak load within province .....	184	291	319	319	347	401	459	496	539	615
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	184	291	319	319	347	401	459	496	539	615
17. Firm power peak load on province (12 + 16)	188	300	342	341	375	429	492	535	579	663
<b>Indicated reserve:</b>										
18. Indicated reserve (13 - 16) .....	12	80	53	101	113	113	52	69	98	184

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast					
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	
	millions of kilowatt-hours											
Net generation by:												
19. Hydro-electric .....	..	975	887	994	1,191	1,272	...	...	...	...	...	
20. Steam - Conventional )				(	870	895	1,019	...	...	...	...	
21. Nuclear )				(	-	-	-	...	...	...	...	
22. Internal combustion )	..	692	842	(	-	-	5	...	...	...	...	
23. Gas turbine )				(	-	-	-	...	...	...	...	
24. Total net generation .....	..	1,667	1,729	1,882	2,088	2,296	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	..	31	28	29	30	211	28	30	33	
26. United States .....	..	..	..	-	14	12	12	12	12	12	12	
(b) Secondary:												
27. Other provinces .....	..	..	..	79	101	60	...	...	..	...	...	
28. United States .....	..	..	..	14	3	2	...	...	...	...	...	
29. Total receipts of energy .....	..	32	111	124	146	103	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	-	51	58	125	166	178	200	243	246	265	284	
31. United States .....	41	51	58	125	166	178	200	243	246	265	284	
(b) Secondary:												
32. Other provinces .....	..	-	-	16	67	57	...	...	...	...	...	
33. United States .....	..	109	107	78	84	68	...	...	...	...	...	
34. Total deliveries of energy .....	..	160	165	219	317	303	...	...	...	...	...	
35. Total energy available (24 + 29 - 34) ..	..	1,539	1,675	1,787	1,917	2,096	...	...	...	...	...	
36. Secondary energy delivered within province .....												
37. Firm energy available within province (35 - 36) ..	1,002	1,537	1,674	1,782	1,912	2,095	2,308	2,752	3,013	3,269	3,450	
38. Indicated shortage .....												
39. Firm energy requirement within province (37 + 38)	1,002	1,537	1,674	1,782	1,912	2,095	2,308	2,752	3,013	3,269	3,450	
40. Firm energy requirement on province (30 + 31 + 39)	1,043	1,588	1,732	1,907	2,078	2,273	2,508	2,995	3,259	3,534	3,734	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Quebec

Capability and peak load	Actual					Forecast				
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967 1968
	thousands of kilowatts									
<u>Capability:</u>										
Net generating capability:										
1. Hydro-electric .....	4,587	7,612	8,658	8,628	8,830	9,271	9,460	10,093	10,527	10,781 11,285
2. Steam - Conventional )				( 59	41	59	209	359	372	372
3. Nuclear )				( -	-	-	-	-	-	-
4. Internal combustion )	26	69	106	( 15	12	10	6	6	6	6
5. Gas turbine )				( 36	36	36	36	36	36	36
6. Total net generating capability	4,613	7,681	8,764	8,738	8,919	9,376	9,711	10,494	10,941	11,195 11,699
Receipts of firm power from:										
7. Other provinces .....	1	9	16	19	15	12	12	12	12	12 12
8. United States .....	-	-	-	2	2	-	-	-	-	- -
9. Total receipts .....	1	9	16	21	17	12	12	12	12	12 12
Deliveries of firm power to:										
10. Other provinces .....	735	696	698	696	697	703	706	709	712	715 674
11. United States .....	56	57	57	38	4	6	6	6	6	6 6
12. Total deliveries .....	791	753	755	734	701	709	712	715	718	721 680
13. Total net capability (6 + 9 - 12) .....	3,823	6,937	8,025	8,025	8,235	8,679	9,011	9,791	10,235	10,486 11,031
<u>Peak loads:</u>										
14. Firm power peak load within province .....	3,462	5,466	5,871	6,258	6,370	7,118	7,653	8,102	8,599	9,046 9,546
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	- -
16. Total indicated firm power peak load within province (14 + 15) .....	3,462	5,466	5,871	6,258	6,370	7,118	7,653	8,102	8,599	9,046 9,546
17. Firm power peak load on province (12 + 16)	4,253	6,219	6,626	6,992	7,071	7,827	8,365	8,817	9,317	9,767 10,226
<u>Indicated reserve:</u>										
18. Indicated reserve (13 - 16) .....	361	1,471	2,154	1,767	1,865	1,561	1,358	1,689	1,636	1,440 1,485



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Quebec	Energy	Actual						Forecast					
		1951	1955	1960	1961	1962	1963	1964	1965	1966	1967	1968	
		millions of kilowatt-hours											
Net generation by:													
19.	Hydro-electric .....	..	44,418	50,000	49,432	49,799	49,454	...	...	...	...	...	...
20.	Steam - Conventional )			(	276	288	320	...	...	...	...	...	...
21.	Nuclear )			(	-	-	-	...	...	...	...	...	...
22.	Internal combustion )	..	209	273	(	7	13	44	...	...	...	...	...
23.	Gas turbine )			(	11	29	1	...	...	...	...	...	...
24.	Total net generation .....	..	44,627	50,273	49,726	50,129	49,819	...	...	...	...	...	...
Receipts of energy from:													
(a) Firm:													
25.	Other provinces .....	..	..	..	87	110	44	45	45	46	46	46	46
26.	United States .....	..	..	..	7	7	-	-	-	-	-	-	-
(b) Secondary:													
27.	Other provinces .....	..	..	..	16	-	99	...	...	...	...	...	...
28.	United States .....	..	..	..	-	-	-	...	...	...	...	...	...
29.	Total receipts of energy .....	..	83	103	110	117	143	...	...	...	...	...	...
Deliveries of energy to:													
(a) Firm:													
30.	Other provinces .....	4,456	4,211	4,193	4,207	3,964	3,975	4,293	4,302	4,323	4,340	4,317	4,317
31.	United States .....	490	492	496	353	14	6	6	6	6	6	6	6
(b) Secondary:													
32.	Other provinces .....	..	1,415	1,723	1,649	1,963	1,004	...	...	...	...	...	...
33.	United States .....	..	54	62	54	294	261	...	...	...	...	...	...
34.	Total deliveries of energy .....	..	6,172	6,474	6,263	6,235	5,246	...	...	...	...	...	...
35.	Total energy available (24 + 29 - 34) ..	..	38,538	43,902	43,573	44,011	44,716	...	...	...	...	...	...
36. Secondary energy delivered within province .....													
37. Firm energy available within province (35 - 36) ..													
38. Indicated shortage .....													
39. Firm energy requirement within province (37 + 38) ..													
40. Firm energy requirement on province (30 + 31 + 39) ..													

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements												
	Actual						Forecast					
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	
Capability and peak load	thousands of kilowatts											
<u>Capability:</u>												
Net generating capability:												
1. Hydro-electric .....	2,476	5,467	5,464	5,292	5,285	5,601	5,602	5,728	5,864	5,885	5,885	
2. Steam - Conventional) .....				( 1,555	1,926	2,376	2,658	2,940	3,225	3,507	4,071	
3. Nuclear ) .....	348	808	1,186	(	-	-	-	-	-	218	218	
4. Internal combustion ) .....				( 11	12	12	8	11	12	13	14	
5. Gas turbine ) .....				(	-	-	-	-	-	-	-	
6. Total net generating capability	2,824	6,275	6,650	6,858	7,223	7,989	8,268	8,679	9,101	9,623	10,188	
Receipts of firm power from:												
7. Other provinces .....	744	692	694	695	692	699	701	703	707	708	667	
8. United States .....	-	-	-	-	-	-	-	-	-	-	-	
9. Total receipts .....	744	692	694	695	692	699	701	703	707	708	667	
Deliveries of firm power to:												
10. Other provinces .....	1	2	2	5	2	2	2	2	2	2	2	
11. United States .....	85	86	86	86	89	88	88	45	45	47	47	
12. Total deliveries .....	86	88	88	91	91	90	90	47	47	49	49	
13. Total net capability (6 + 9 - 12) .....	3,482	6,879	7,256	7,462	7,824	8,598	8,879	9,335	9,761	10,282	10,806	
<u>Peak loads:</u>												
14. Firm power peak load within province .....	3,292	6,154	6,391	6,615	6,913	7,412	7,852	8,282	8,770	9,280	9,790	
15. Indicated shortages .....	319	-	-	-	-	-	-	-	-	-	-	
16. Total indicated firm power peak load within province (14 + 15) .....	3,611	6,154	6,391	6,615	6,913	7,412	7,852	8,282	8,770	9,280	9,790	
17. Firm power peak load on province (12 + 16)	3,697	6,242	6,479	6,706	7,004	7,502	7,942	8,329	8,817	9,329	9,839	
<u>Indicated reserve:</u>												
18. Indicated reserve (13 - 16) .....	- 129	725	865	847	911	1,186	1,027	1,053	991	1,002	1,016	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual							Forecast				
	1951	1955	1960	1961	1962	1963	1964	1965	1966	1967	1968	
	millions of kilowatt-hours											
Net generation by:												
19.	Hydro-electric .....	..	32,301	34,870	33,654	30,872	29,099	...	...	...	...	...
20.	Steam - Conventional )				( 1,187	4,335	8,291	...	...	...	...	...
21.	Nuclear )				( -	22	87	...	...	...	...	...
22.	Internal combustion )	..	946	822	(	31	29	24	...	...	...	...
23.	Gas turbine )				(	-	1	-	...	...	...	...
24.	Total net generation .....	..	33,247	35,692	34,872	35,259	37,501	...	...	...	...	...
Receipts of energy from:												
(a) Firm:												
25.	Other provinces .....	..	..	..	4,188	3,943	3,954	4,270	4,277	4,295	4,310	4,284
26.	United States .....	..	..	..	-	-	-	-	-	-	-	-
(b) Secondary:												
27.	Other provinces .....	..	..	..	1,649	2,009	1,008	...	...	...	...	...
28.	United States .....	..	..	..	1,362	2,704	2,846	...	...	...	...	...
29.	Total receipts of energy .....	..	6,094	6,182	7,199	8,656	7,808	...	...	...	...	...
Deliveries of energy to:												
(a) Firm:												
30.	Other provinces .....	3	5	6	7	7	8	9	9	10	10	10
31.	United States .....	703	710	727	642	635	672	652	453	392	400	408
(b) Secondary:												
32.	Other provinces .....	..	83	131	275	221	257	...	...	...	...	...
33.	United States .....	..	3,154	4,043	2,909	2,875	2,406	...	...	...	...	...
34.	Total deliveries of energy .....	..	3,952	4,907	3,833	3,738	3,343	...	...	...	...	...
35.	Total energy available (24 + 29 - 34)	..	35,389	36,967	38,238	40,177	41,966	...	...	...	...	...
36. Secondary energy delivered within province .....												
37.	Firm energy available within province (35 - 36) ..	20,395	34,904	36,382	37,727	39,631	41,529	44,311	46,615	49,397	52,378	55,663
38.	Indicated shortage .....	97	-	-	-	-	-	-	-	-	-	-
39.	Firm energy requirement within province (37 + 38)	20,492	34,904	36,382	37,727	39,631	41,529	44,311	46,615	49,397	52,378	55,663
40.	Firm energy requirement on province (30 + 31 + 39)	21,198	35,619	37,115	38,376	40,273	42,209	44,972	47,077	49,799	52,788	56,081

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load							Actual					Forecast					
							1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
							thousands of kilowatts										
Capability:																	
Net generating capability:																	
1.	Hydro-electric .....	413	566	701	735	735	735	945	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	
2.	Steam - Conventional)				( 166	291	291	291	291	291	291	291	291	291	291	291	
3.	Nuclear ) .....	10	168	231	( -	-	-	-	-	-	-	-	-	-	-	-	
4.	Internal combustion )				( 4	7	7	8	8	9	9	9	9	9	9	9	
5.	Gas turbine ) .....				( -	-	-	-	-	-	-	-	-	-	-	-	
6.	Total net generating capability	423	734	932	905	1,033	1,033	1,244	1,349	1,350	1,350	1,350	1,350	1,350	1,350	1,350	
Receipts of firm power from:																	
7.	Other provinces .....	77	72	86	83	87	134	84	84	84	84	84	84	84	84	84	
8.	United States .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9.	Total receipts .....	77	72	86	83	87	134	84	84	84	84	84	84	84	84	84	
Deliveries of firm power to:																	
10.	Other provinces .....	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11.	United States .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12.	Total deliveries .....	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13.	Total net capability (6 + 9 - 12) .....	491	806	1,018	988	1,120	1,167	1,328	1,433	1,434	1,434	1,434	1,434	1,434	1,434	1,434	
Peak loads:																	
14.	Firm power peak load within province .....	454	690	772	849	907	955	987	1,031	1,078	1,127	1,127	1,127	1,127	1,177	1,177	
15.	Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16.	Total indicated firm power peak load within province (14 + 15) .....	454	690	772	849	907	955	987	1,031	1,078	1,127	1,127	1,127	1,127	1,177	1,177	
17.	Firm power peak load on province (12 + 16)	463	690	772	849	907	955	987	1,031	1,078	1,127	1,127	1,127	1,127	1,177	1,177	
Indicated reserve:																	
18.	Indicated reserve (13 - 16) .....	37	116	246	139	213	212	341	402	356	307	307	307	356	307	257	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast					
	1951	1955	1960	1961	1962	1963	1964	1965	1966	1967	1968	
millions of kilowatt-hours												
Net generation by:												
19. Hydro-electric .....	..	3,582	3,735	3,591	4,220	4,736	...	...	...	...	...	
20. Steam - Conventional )				( 238	120	61	...	...	...	...	...	
21. Nuclear )		51	75	( -	-	-	...	...	...	...	...	
22. Internal combustion )	..			( 11	12	13	...	...	...	...	...	
23. Gas turbine )				( -	-	-	...	...	...	...	...	
24. Total net generation .....	..	3,633	3,810	3,840	4,352	4,810	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	..	623	647	687	686	686	686	686	686	
26. United States .....	..	..	..	-	-	-	-	-	-	-	-	
(b) Secondary:												
27. Other provinces .....	..	..	..	301	199	198	...	...	...	...	...	
28. United States .....	..	..	..	-	-	-	...	...	...	...	...	
29. Total receipts of energy .....	..	652	739	924	846	885	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	79	-	-	2	29	-	-	-	-	-	-	
31. United States .....	-	-	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
32. Other provinces .....	..	3	4	4	46	65	...	...	...	...	...	
33. United States .....	..	-	-	-	-	-	...	...	...	...	...	
34. Total deliveries of energy .....	..	3	4	6	75	65	...	...	...	...	...	
35. Total energy available (24 + 29 - 34)	..	4,282	4,545	4,758	5,123	5,630	...	...	...	...	...	
Secondary energy delivered within province .....												
37. Firm energy available within province (35 - 36) ..	2,443	3,889	4,201	4,698	5,003	5,445	5,658	5,868	6,111	6,366	6,636	
Indicated shortage .....												
39. Firm energy requirement within province (37 + 38)	2,443	3,889	4,201	4,698	5,003	5,445	5,658	5,868	6,111	6,366	6,636	
40. Firm energy requirement on province (30 + 31 + 39)	2,522	3,889	4,201	4,700	5,032	5,445	5,658	5,868	6,111	6,366	6,636	



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast			
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967 1968
thousands of kilowatts										
<b>Capability:</b>										
Net generating capability:										
1. Hydro-electric .....	85	88	99	107	107	208	309	309	343	376 477
2. Steam - Conventional) .....				( 527	575	492	492	492	492	492
3. Nuclear ) .....				( -	-	-	-	-	-	-
4. Internal combustion ) .....	160	583	653	( -	37	36	36	35	35	35
5. Gas turbine ) .....				( 43	33	39	39	39	39	39
6. Total net generating capability	245	671	752	757	752	775	876	875	909	942 1,043
<b>Receipts of firm power from:</b>										
7. Other provinces .....	-	1	1	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	1	1	-	-	-	-	-	-	-
<b>Deliveries of firm power to:</b>										
10. Other provinces .....	77	72	86	88	87	134	84	84	84	84
11. United States .....	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	77	72	86	88	87	134	84	84	84	84
13. Total net capability (6 + 9 - 12) .....	168	600	667	669	665	641	792	791	825	858 959
<b>Peak loads:</b>										
14. Firm power peak load within province .....	127	377	418	466	497	531	579	632	684	711 809
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	127	377	418	466	497	531	579	632	684	711 809
17. Firm power peak load on province (12 + 16)	204	449	504	554	584	665	663	716	768	795 893
<b>Indicated reserve:</b>										
18. Indicated reserve (13 - 16) .....	41	223	249	203	168	110	213	159	141	147 150

Saskatchewan

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	586	620	658	704	985	...	...	...	...	...
20. Steam - Conventional)				( 1,682	1,844	1,833	...	...	...	...	...
21. Nuclear )				( -	-	-	...	...	...	...	...
22. Internal combustion )	..	1,498	1,659	( 109	97	106	...	...	...	...	...
23. Gas turbine )				( 62	37	49	...	...	...	...	...
24. Total net generation .....	..	2,084	2,279	2,511	2,682	2,973	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	..	-	29	-	-	-	-	-	-
26. United States .....	..	..	..	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	..	..	6	-	62	...	...	...	...	...
28. United States .....	..	..	..	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	8	6	6	29	62	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	515	517	575	621	647	687	686	686	686	686	686
31. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	78	44	41	-	4	...	...	...	...	...
33. United States .....	..	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	595	619	662	647	691	...	...	...	...	...
35. Total energy available (24 + 29 - 34) .....	..	1,497	1,666	1,855	2,064	2,344	...	...	...	...	...
36. Secondary energy delivered within province .....	..	-	-	-	-	17	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	467	1,497	1,666	1,855	2,064	2,327	2,535	2,798	2,941	3,234	3,529
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	467	1,497	1,666	1,855	2,064	2,327	2,535	2,798	2,941	3,234	3,529
40. Firm energy requirement on province (30 + 31 + 39)	982	2,014	2,241	2,476	2,711	3,014	3,221	3,484	3,627	3,920	4,215

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load		Actual						Forecast				
		1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
thousands of kilowatts												
Capability:												
Net generating capability:												
1.	Hydro-electric .....	162	238	318	327	327	326	476	476	626	626	626
2.	Steam - Conventional)			( 498	643	713		745	745	817	1,102	1,164
3.	Nuclear )			( -	-	-		-	-	-	-	-
4.	Internal combustion )	109	530	607	( 28	33	31	32	35	37	37	38
5.	Gas turbine )			( 108	130	130		130	131	131	132	162
6.	Total net generating capability	271	768	925	953	1,133	1,200	1,383	1,387	1,611	1,897	1,990
Receipts of firm power from:												
7.	Other provinces .....	-	3	3	-	-	-	-	-	-	-	-
8.	United States .....	-	-	-	-	-	-	-	-	-	-	-
9.	Total receipts .....	-	3	3	-	-	-	-	-	-	-	-
Deliveries of firm power to:												
10.	Other provinces .....	5	1	1	5	4	10	12	12	14	13	13
11.	United States .....	-	-	-	-	-	-	-	-	-	-	-
12.	Total deliveries .....	5	1	1	5	4	10	12	12	14	13	13
13.	Total net capability (6 + 9 - 12) .....	266	770	927	948	1,129	1,190	1,371	1,375	1,597	1,884	1,977
Peak loads:												
14.	Firm power peak load within province .....	220	649	714	836	882	984	1,066	1,154	1,244	1,342	1,445
15.	Indicated shortages .....											
16.	Total indicated firm power peak load within province (14 + 15) .....	220	649	714	836	882	984	1,066	1,154	1,244	1,342	1,445
17.	Firm power peak load on province (12 + 16)	225	650	715	841	886	994	1,078	1,166	1,258	1,355	1,458
Indicated reserve:												
18.	Indicated reserve (13 - 16) .....	46	121	213	112	247	206	305	221	353	542	532

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual					Forecast						
	1951	1955	1960	1961	1962	1963	1964	1965	1966	1967	1968	
millions of kilowatt-hours												
Net generation by:												
19. Hydro-electric .....	..	842	887	1,023	956	881	...	...	...	...	...	
20. Steam - Conventional)				( 2,534	2,900	3,294	...	...	...	...	...	
21. Nuclear ) .....		2,228	2,540	( -	-	-	...	...	...	...	...	
22. Internal combustion ) .....	..			( 51	59	60	...	...	...	...	...	
23. Gas turbine ) .....				( 165	187	257	...	...	...	...	...	
24. Total net generation .....	..	3,070	3,427	3,773	4,102	4,492	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	..	6	23	4	6	6	7	7	8	
26. United States .....	..	..	..	-	-	-	-	-	-	-	-	
(b) Secondary:												
27. Other provinces .....	..	..	..	30	-	23	...	...	...	...	...	
28. United States .....	..	..	..	-	-	-	...	...	...	...	...	
29. Total receipts of energy .....	..	34	30	36	23	27	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	20	5	3	1	4	-	-	-	-	-	-	
31. United States .....	-	-	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
32. Other provinces .....	..	2	2	-	-	-	...	...	...	...	...	
33. United States .....	..	..	..	-	-	-	...	...	...	...	...	
34. Total deliveries of energy .....	..	7	5	1	4	-	...	...	...	...	...	
35. Total energy available (24 + 29 - 34) ..	..	3,097	3,452	3,808	4,121	4,519	...	...	...	...	...	
36. Secondary energy delivered within province .....												
37. Firm energy available within province (35 - 36) ..	1,114	3,097	3,452	3,808	4,121	4,519	4,933	5,326	5,740	6,188	6,663	
38. Indicated shortage .....												
39. Firm energy requirement within province (37 + 38)	1,114	3,097	3,452	3,808	4,121	4,519	4,933	5,326	5,740	6,188	6,663	
40. Firm energy requirement on province (30 + 31 + 39)	1,134	3,102	3,455	3,809	4,125	4,519	4,933	5,326	5,740	6,188	6,663	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast					
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	
thousands of kilowatts												
Capability:												
Net generating capability:												
1. Hydro-electric .....	908	2,524	2,659	2,672	2,599	2,670	2,670	2,674	2,764	2,764	3,094	
2. Steam - Conventional)				( 117	424	475	630	634	637	807	809	
3. Nuclear ) .....	107	353	369	(								
4. Internal combustion ) .....				( 109	112	106	118	117	117	117	117	
5. Gas turbine ) .....				( 172	172	177	177	177	177	177	177	
6. Total net generating capability	1,015	2,877	3,028	3,070	3,307	3,428	3,595	3,602	3,695	3,865	4,197	
Receipts of firm power from:												
7. Other provinces .....	5	-	-	5	4	10	12	12	13	13	13	
8. United States .....	-	-	-	-	-	-	-	-	-	-	-	
9. Total receipts .....	5	-	-	5	4	10	12	12	13	13	13	
Deliveries of firm power to:												
10. Other provinces .....	-	3	3	-	-	-	-	-	-	-	-	
11. United States .....	30	-	-	-	-	-	-	-	-	-	-	
12. Total deliveries .....	30	3	3	-	-	-	-	-	-	-	-	
13. Total net capability (6 + 9 - 12) .....	990	2,874	3,025	3,075	3,311	3,438	3,607	3,614	3,708	3,878	4,210	
Peak loads:												
14. Firm power peak load within province .....	861	1,963	2,123	2,368	2,317	2,537	2,780	2,921	3,018	3,204	3,307	
15. Indicated shortages .....	-	-	-	-	-	-	-	28	70	86	88	
16. Total indicated firm power peak load within province (14 + 15) .....	861	1,963	2,123	2,368	2,317	2,537	2,780	2,949	3,088	3,290	3,395	
17. Firm power peak load on province (12 + 16)	891	1,966	2,126	2,368	2,317	2,537	2,780	2,949	3,088	3,290	3,395	
Indicated reserve:												
18. Indicated reserve (13 - 16) .....	129	911	902	707	994	901	827	665	620	588	815	



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast					
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	
millions of kilowatt-hours												
Net generation by:												
19. Hydro-electric .....	..	11,673	12,584	12,295	13,500	14,194	...	...	...	...	...	
20. Steam - Conventional) )				( 535	665	780	...	...	...	...	...	
21. Nuclear )				( -	-	-	...	...	...	...	...	
22. Internal combustion )	..	603	729	( 246	261	300	...	...	...	...	...	
23. Gas turbine )				( 10	3	5	...	...	...	...	...	
24. Total net generation .....	..	12,276	13,313	13,086	14,429	15,279	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	..	1	4	-	-	-	-	-	-	
26. United States .....	..	..	..	1	1	-	-	-	-	-	-	
(b) Secondary:												
27. Other provinces .....	..	..	..	-	-	-	...	...	...	...	...	
28. United States .....	..	..	..	16	57	19	...	...	...	...	...	
29. Total receipts of energy .....	..	30	72	18	62	19	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	-	6	3	6	23	4	6	6	7	7	8	
31. United States .....	184	-	2	2	2	2	-	-	-	-	-	
(b) Secondary:												
32. Other provinces .....	..	28	27	30	-	23	...	...	...	...	...	
33. United States .....	..	14	16	17	14	19	...	...	...	...	...	
34. Total deliveries of energy .....	..	48	48	55	39	48	...	...	...	...	...	
35. Total energy available (24 + 29 - 34) ..	..	12,258	13,337	13,049	14,452	15,250	...	...	...	...	...	
36. Secondary energy delivered within province .....	..	167	233	242	230	268	...	...	...	...	...	
37. Firm energy available within province (35 - 36) ..	4,741	12,091	13,104	12,807	14,222	14,982	16,536	17,652	18,605	19,603	20,471	
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-	
39. Firm energy requirement within province (37 + 38)	4,741	12,091	13,104	12,807	14,222	14,982	16,536	17,652	18,605	19,603	20,471	
40. Firm energy requirement on province (30 + 31 + 39)	4,925	12,097	13,109	12,815	14,247	14,988	16,542	17,658	18,612	19,610	20,479	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast			
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1968
	thousands of kilowatts									
<b>Capability:</b>										
Net generating capability:										
1. Hydro-electric .....	21	37	44	44	44	44	44	44	44	44
2. Steam - Conventional )				( 1	1	1	1	1	1	1
3. Nuclear ) .....	-	4	11	( -	-	-	-	-	-	-
4. Internal combustion )				( 10	10	11	12	12	12	12
5. Gas turbine )				( -	-	-	1	1	1	1
6. Total net generating capability	21	41	55	55	55	56	58	58	58	58
Receipts of firm power from:										
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:										
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	21	41	55	55	55	56	58	58	58	58
<b>Peak loads:</b>										
14. Firm power peak load within province .....	14	31	34	29	32	32	32	32	32	32
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	14	31	34	29	32	32	32	32	32	32
17. Firm power peak load on province (12 + 16)	14	31	34	29	32	32	32	32	32	32
<b>Indicated reserve:</b>										
18. Indicated reserve (13 - 16) .....	7	10	21	26	23	24	26	26	26	26

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	millions of kilowatt-hours										
Net generation by:											
19. Hydro-electric .....	..	146	152	174	187	189	...	...	...	...	...
20. Steam - Conventional)				( 2	2	2	...	...	...	...	...
21. Nuclear )				( -	-	-	...	...	...	...	...
22. Internal combustion )	..	21	14	(			...	...	...	...	...
23. Gas turbine )				( 19	24	24	...	...	...	...	...
24. Total net generation .....	..	167	166	195	213	215	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	..	-	-	-	...	...	...	...	...
26. United States .....	..	..	..	-	-	-	...	...	...	...	...
(b) Secondary:											
27. Other provinces .....	..	..	..	-	-	-	...	...	...	...	...
28. United States .....	..	..	..	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	..	..	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
31. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	167	166	195	213	215	...	...	...	...	...
36. Secondary energy delivered within province .....											
37. Firm energy available within province (35 - 36) ..	64	141	138	153	162	165	168	162	163	166	168
38. Indicated shortage .....											
39. Firm energy requirement within province (37 + 38)	64	141	138	153	162	165	168	162	163	166	168
40. Firm energy requirement on province (30 + 31 + 39)	64	141	138	153	162	165	168	162	163	166	168

TABLE 2. Total Net Generating Capability within Provinces(1)

Province	1951	1959	1960	1961	1962	1963	Forecast				Percentage change (compounded)			
							1964	1965	1966	1967	1968	1951 1963	1959 1963	1963 1968
thousands of kilowatts														
Newfoundland (including Labrador) ....	200	267	309	311	409	496	497	502	504	515	515	7.86	16.75	0.75
Prince Edward Island .....	18	25	38	37	37	58	58	58	58	78	78	10.24	23.41	6.10
Nova Scotia .....	248	493	499	508	521	532	532	627	657	668	683	6.57	1.92	5.13
New Brunswick .....	198	373	388	436	480	535	537	570	668	669	837	8.63	9.43	9.36
Quebec .....	4,613	7,681	8,764	8,738	8,919	9,376	9,711	10,494	10,941	11,195	11,699	6.09	5.12	4.53
Ontario .....	2,824	6,275	6,650	6,858	7,223	7,989	8,268	8,679	9,101	9,623	10,188	9.05	6.22	4.98
Manitoba .....	423	734	932	905	1,033	1,033	1,244	1,349	1,350	1,350	1,350	7.72	8.91	5.50
Saskatchewan .....	245	671	752	757	752	775	876	875	909	942	1,043	10.07	3.67	6.12
Alberta .....	271	768	925	953	1,133	1,200	1,383	1,387	1,611	1,897	1,990	13.20	11.81	10.64
British Columbia .....	1,015	2,877	3,028	3,070	3,307	3,428	3,595	3,602	3,695	3,865	4,197	10.67	4.25	4.13
Yukon and Northwest Territories .....	21	41	55	55	55	56	58	58	58	58	58	8.52	8.11	0.71
Canada .....	10,076	20,205	22,340	22,628	23,869	25,478	26,759	28,201	29,552	30,860	32,638	8.04	5.97	6.39

(1) Table 1, item 6.

TABLE 3. Firm Power Peak Load within Provinces(1)

Province	1951	1959	1960	1961	1962	1963	Forecast				Percentage change (compounded)			
							1964	1965	1966	1967	1968	1951 1963	1959 1963	1963 1968
thousands of kilowatts														
Newfoundland (including Labrador) .....	182	231	245	242	294	349	389	456	466	466	481	5.58	10.87	6.62
Prince Edward Island .....	8	19	21	24	25	27	30	33	35	38	40	10.67	9.18	8.17
Nova Scotia .....	185	330	356	347	388	411	438	466	488	517	547	6.88	5.63	5.89
New Brunswick .....	184	291	319	319	347	401	458	496	539	575	615	6.73	8.34	8.94
Quebec .....	3,462	5,466	5,871	6,258	6,370	7,118	7,653	8,102	8,599	9,046	9,546	6.19	7.19	6.05
Ontario .....	3,292	6,154	6,391	6,615	6,913	7,412	7,852	8,282	8,770	9,280	9,790	7.00	4.75	5.73
Manitoba .....	454	690	772	849	907	955	987	1,031	1,078	1,127	1,177	6.40	8.46	4.26
Saskatchewan .....	127	377	418	466	497	531	579	632	684	711	809	7.62	8.93	8.80
Alberta .....	220	649	714	836	882	984	1,066	1,154	1,244	1,342	1,445	13.33	11.07	7.91
British Columbia .....	861	1,963	2,123	2,368	2,317	2,537	2,780	2,921	3,018	3,204	3,307	9.42	6.62	5.46
Yukon and Northwest Territories .....	14	31	34	29	32	32	32	32	32	32	32	7.13	0.79	0.00
Canada .....	8,989	16,201	17,264	18,353	18,972	20,757	22,265	23,605	24,953	26,338	27,789	7.24	6.39	6.01

(1) Table 1, item 14.



TABLE 4. Firm Energy Requirement within Provinces(1)

Province	1951	1959	1960	1961	1962	1963	Forecast				Percentage change (compounded)			
							1964	1965	1966	1967	1968	1951 1963	1959 1963 1968	
millions of kilowatt hours														
Newfoundland (including Labrador) .....	1,040	1,215	1,320	1,361	1,473	1,878	1,927	2,156	2,206	2,241	2,293	5.05	11.51	4.08
Prince Edward Island .....	34	71	79	88	101	111	120	129	138	147	158	10.36	11.81	7.31
Nova Scotia .....	1,027	1,626	1,714	1,775	1,965	2,100	2,212	2,345	2,519	2,662	2,769	6.14	6.62	5.70
New Brunswick .....	1,002	1,537	1,674	1,782	1,912	2,095	2,308	2,752	3,013	3,269	3,450	6.34	8.05	10.50
Quebec .....	23,404	34,035	38,552	39,022	40,389	42,103	44,826	48,310	50,834	53,434	56,123	5.02	5.46	5.92
Ontario .....	20,492	34,904	36,382	37,727	39,631	41,529	44,311	46,615	49,397	52,378	55,663	6.06	4.45	6.03
Manitoba .....	2,443	3,889	4,201	4,698	5,003	5,445	5,658	5,868	5,611	6,366	6,636	6.91	8.78	4.04
Saskatchewan .....	467	1,497	1,666	1,855	2,064	2,327	2,535	2,798	2,941	3,234	3,529	14.32	11.65	8.69
Alberta .....	1,114	3,097	3,452	3,808	4,121	4,519	4,933	5,326	5,740	6,188	6,663	12.38	9.90	8.07
British Columbia .....	4,741	12,091	13,104	12,807	14,222	14,982	16,536	17,652	18,605	19,603	20,471	10.06	5.50	6.44
Yukon and Northwest Territories .....	64	141	138	153	162	165	168	162	163	166	168	8.21	4.00	0.36
Canada .....	55,828	94,103	102,282	105,076	111,043	117,254	125,534	134,113	141,667	149,688	157,923	6.38	5.66	6.14

(1) Table 1, item 39.

TABLE 5. Indicated Reserve(1)

Province	1951	1959	1960	1961	1962	1963	Forecast				Percentage change (compounded)			
							1964	1965	1966	1967	1968	1951 1963	1959 1963	1963 1968
thousands of kilowatts														
Newfoundland (including Labrador):														
1. Gross capability .....	200	267	309	311	409	496	497	502	504	515	515	7.86	16.75	0.75
2. Firm power peak load on province ...	182	238	259	255	307	387	399	466	476	476	491	6.49	12.92	4.88
3. Indicated reserve (1 - 2) .....	18	29	50	56	102	109	98	36	28	39	24	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	9.9	12.2	19.3	22.0	33.2	28.2	24.6	7.7	5.9	8.2	4.9	...	...	...
Prince Edward Island:														
1. Gross capability .....	18	25	38	37	37	58	58	58	58	78	78	10.24	23.41	6.10
2. Firm power peak load on province ...	8	19	21	24	25	27	30	33	35	38	40	10.67	9.18	8.17
3. Indicated reserve (1 - 2) .....	10	6	17	13	12	31	28	25	23	40	38	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	125.0	31.6	81.0	54.2	48.0	114.8	93.3	75.8	65.7	105.3	95.0	...	...	...
Nova Scotia:														
1. Gross capability .....	248	493	499	508	521	532	532	627	657	668	683	6.57	1.92	5.13
2. Firm power peak load on province ...	189	333	359	348	389	412	438	491	488	517	547	6.71	5.46	5.84
3. Indicated reserve (1 - 2) .....	59	160	140	160	132	120	94	136	169	151	136	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	31.2	48.0	39.0	46.0	33.9	29.1	21.5	27.7	34.6	29.2	24.9	...	...	...
New Brunswick:														
1. Gross capability .....	200	380	395	442	488	542	544	604	677	679	847	8.66	9.28	9.34
2. Firm power peak load on province ...	188	300	342	341	375	429	492	535	579	619	663	7.12	9.36	9.09
3. Indicated reserve (1 - 2) .....	12	80	53	101	113	113	52	69	98	60	184	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	6.4	26.7	15.5	29.6	30.1	26.3	10.6	12.9	16.9	9.7	27.8	...	...	...

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5.

TABLE 5, Indicated Reserved(1) - Continued

Province	1951	1959	1960	1961	1962	1963	Forecast					Percentage change (compounded)			
	1964	1965	1966	1967	1968	1951 1963	1959 1963	1968	1963 1968						
thousands of kilowatts															
<u>Quebec:</u>															
1. Gross capability .....	4,614	7,690	8,780	8,759	8,936	9,388		9,723	10,506	10,953	11,207	11,711	6.10	5.12	4.51
2. Firm power peak load on province ...	4,253	6,219	6,626	6,992	7,071	7,827		8,365	8,817	9,317	9,767	10,226	5.21	5.93	5.50
3. Indicated reserve (1 - 2) .....	361	1,471	2,154	1,767	1,865	1,561		1,358	1,689	1,636	1,440	1,485	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	8.5	23.7	32.5	25.3	26.4	19.9		16.2	19.2	17.6	14.7	14.5	...	...	...
<u>Ontario:</u>															
1. Gross capability .....	3,568	6,967	7,344	7,553	7,915	8,688		8,969	9,382	9,808	10,331	10,855	7.70	5.68	4.55
2. Firm power peak load on province ...	3,697	6,242	6,479	6,706	7,004	7,502		7,942	8,329	8,817	9,329	9,839	6.07	4.71	5.58
3. Indicated reserve (1 - 2) .....	- 129	725	865	847	911	1,186		1,027	1,053	991	1,002	1,016	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	...	11.6	13.4	12.6	13.0	15.8		12.9	12.6	11.2	10.7	10.3	...	...	...
<u>Manitoba:</u>															
1. Gross capability .....	500	806	1,018	988	1,120	1,167		1,328	1,433	1,434	1,434	1,434	7.32	9.70	4.21
2. Firm power peak load on province ...	463	690	772	849	907	955		987	1,031	1,078	1,127	1,177	6.22	8.46	4.26
3. Indicated reserve (1 - 2) .....	37	116	246	139	213	212		341	402	356	307	257	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	8.0	16.8	31.9	16.4	23.5	22.2		34.5	39.0	33.0	27.2	21.8	...	...	...
<u>Saskatchewan:</u>															
1. Gross capability .....	245	672	753	757	752	775		876	875	909	942	1,043	10.07	3.62	6.12
2. Firm power peak load on province ...	204	449	504	554	584	665		663	716	768	795	893	10.35	10.32	6.08
3. Indicated reserve (1 - 2) .....	41	223	249	203	168	110		213	159	141	147	150	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	20.1	49.7	49.4	36.6	28.8	16.5		32.1	22.0	18.4	18.5	16.8	...	...	...

1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18)

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserve(1) - Concluded

	Province	1951	1959	1960	1961	1962	1963	Forecast				Percentage change (compounded)			
								1964	1965	1966	1967	1968	1951 1963	1959 1963	1963 1968
thousands of kilowatts															
<u>Alberta:</u>															
1.	Gross capability .....	271	771	928	953	1,133	1,200	1,383	1,387	1,611	1,897	1,990	13.20	11.69	10.64
2.	Firm power peak load on province ..	225	650	715	841	886	994	1,078	1,166	1,258	1,355	1,458	13.22	11.31	7.88
3.	Indicated reserve (1 - 2) .....	46	121	213	112	247	206	305	221	353	542	532	...	...	...
4.	Indicated reserve expressed as a per cent of firm power peak load .....	20.4	18.6	29.8	13.3	27.9	20.2	28.3	19.0	28.1	40.0	36.5	...	...	...
<u>British Columbia:</u>															
1.	Gross capability .....	1,020	2,877	3,028	3,075	3,311	3,438	3,607	3,614	3,708	3,878	4,210	10.66	4.56	4.15
2.	Firm power peak load on province ...	891	1,966	2,126	2,368	2,317	2,537	2,780	2,949	3,088	3,290	3,395	9.11	6.58	6.00
3.	Indicated reserve (1 - 2) .....	129	911	902	707	994	901	827	665	620	588	815	...	...	...
4.	Indicated reserve expressed as a per cent of firm power peak load .....	14.5	46.3	42.4	29.9	42.9	35.5	29.7	22.6	16.8	17.9	24.0	...	...	...
<u>Yukon and Northwest Territories:</u>															
1.	Gross capability .....	21	41	55	55	55	56	58	58	58	58	58	8.52	8.11	0.71
2.	Firm power peak load on province ..	14	31	34	29	32	32	32	32	32	32	32	7.13	0.79	0.00
3.	Indicated reserve (1 - 2) .....	7	10	21	26	23	24	26	26	26	26	26	...	...	...
4.	Indicated reserve expressed as a per cent of firm power peak load .....	50.0	32.3	61.8	98.7	71.9	75.0	81.3	81.3	81.3	81.3	81.3	...	...	...
<u>Canada:</u>															
1.	Gross capability .....	10,076 <sup>r</sup>	20,205	22,340	22,630	23,873 <sup>r</sup>	25,480	26,761	28,204	29,555	30,863	32,641	8.04	5.97	5.08
2.	Firm power peak load on Canada .....	9,485 <sup>r</sup>	16,353	17,430	18,499	19,093	20,907	22,392	23,723	25,114	26,521	27,978	6.81	6.35	6.00
3.	Indicated reserve (1 - 2) .....	591	3,852	4,910	4,131	4,780 <sup>r</sup>	4,573	4,369	4,481	4,441	4,342	4,663	...	...	...
4.	Indicated reserve expressed as a per cent of firm power peak load .....	6.2	23.5	28.2	22.3	25.0 <sup>r</sup>	21.9	19.5	18.9	17.7	16.4	16.7	...	...	...
(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18). <sup>r</sup> Revised figures.															

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).  
<sup>r</sup> Revised figures.

## GLOSSARY OF TERMS

### Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

### Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

### Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

### Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

### Indicated Demand

The sum of firm power peak load and indicated shortage.

### Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

### Industrial Establishment

A firm which generates power primarily for use in its own plants.

### Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

### Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

### System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.











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CANADA

Statistics

# ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1964 Actual

1965 - 1969 Forecast



DOMINION BUREAU OF STATISTICS





DOMINION BUREAU OF STATISTICS

Industry Division

Energy Statistics Section

ANNUAL ELECTRIC POWER SURVEY  
OF CAPABILITY AND LOAD

1964 Actual

1965 - 1969 Forecast

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ELECTRIC POWER

Catalogue number	Title	Price
Annual		
57-201	Electric and Gas Meter Registrations. Approx. 250pp.  Meter registrations by province, county or census division, company and place served, by type of service .....	\$2.50
57-202	Electric Power Statistics. Approx. 65pp.  Summary and detailed analyses of generation and use of electric power in Canada, power plant equipment, customers, employees, salaries and wages and financial statistics .....	.75
57-203	Electricity Bills for Domestic, Commercial and Small Power Service. Approx. 15pp.  Includes an annual index of electricity bills for domestic service, and bills for light and power in cities and represen- tative municipalities .....	.50
57-204	Electric Power Survey of Capability and Load. Approx. 50pp.  Current and projected data of capability and load of major producers of electric energy in Canada .....	.75
Monthly		
57-001	Electric Power Statistics. Approx. 4pp.  Production by utilities and industrial establishments, imports and exports, power made available for use in Canada, amount used in electric boilers, by provinces. Per copy 10¢; per year .....	\$1.00
Occasional		
57-502	Inventory of Prime Mover and Electric Generating Equipment. Approx. 120pp.  A list of generating plants in Canada by ownership showing the location, year of installation, name-plate rating and other details of each unit, as at December 31, 1961 .....	\$1.50

## TABLE OF CONTENTS

Page

Introduction .....	5
--------------------	---

### CHARTS

A. Total Generating Capability within Canada .....	8
This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	
B. Net Capability and Peak Loads within Canada .....	9
This chart provides an indication of the reserves available to meet firm demand for electric power within Canada.	
C. Net Generating Capability within Provinces .....	10
This chart illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.	
D. Net Capability and Firm Demand within Provinces .....	12
This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.	
E. Firm Energy Requirement within Canada .....	14
This chart shows the growth in Canadian firm energy requirement during the period 1954-1969	

### TABLES

1. <u>Capability, Firm Power Peak Load and Energy Requirements</u> .....	16
This table summarizes capability, firm power peak load, indicated reserve, generation, interprovincial receipts and deliveries, secondary energy and firm energy requirements.	
2. <u>Total Net Generating Capability within Provinces</u> .....	40
This table compares provincial rates of growth in net generating capability.	
3. <u>Firm Power Peak Load within Provinces</u> .....	41
This table compares rates of growth of firm power peak load within provinces.	
4. <u>Firm Energy Requirement within Provinces</u> .....	42
This table compares rates of growth of firm energy requirement within provinces.	
5. <u>Indicated Reserve</u> .....	43
This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	
Glossary of Terms .....	46
Canadian Electrical Association - Electric Power Statistics Committee Personnel 1964-1965 .....	47

### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

r Revised figures.

.. Figures not available.

... Figures not appropriate or not applicable.

- Nil or zero.



## INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1965. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions.

There are approximately 150 responding firms in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.5 per cent of all generation, and all the imports and exports. The utilities group contributes approximately 80 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable.

## Review of Survey Results

Total net generating capability in 1964 for firms which generate over 10 million kwh. per year increased 547,000 kw or 2.15 per cent to 26,025,000 kw. The forecast years 1965-69 indicate an anticipated growth of 11,543,000 kw. or a compound growth rate of 7.62 per cent as compared with the 1954-1964 growth rate of 6.92 per cent. Thermal capability is expected to grow at the rate of 12.7 per cent in the forecast period compared with 14.2 per cent in the previous ten year period, while hydro-electric capability is expected to increase at 5.9 per cent compared with 5.5 per cent in the previous ten years. The reversal of downward trend in hydro-electric capability which has been evident in the past few years is due to the large power projects which are now under construction in relatively remote areas and which will be put into service in the forecast years. The hydro-electric capability forecast figures do not include the Hamilton Falls development in Labrador. Ninety-four per cent of the thermal capability growth will be in conventional steam plants.

The first nuclear capability is forecast for 1967. The nuclear capability does not include the 20,000 kw. plant at Rolphton, Ontario, which is an experimental plant and therefore is no longer considered part of the capability. However, energy generated in this plant has been fed into the system and is included in Table 1.

In 1963 it was forecast that the net generating capability in 1964 would be 26,759,000 kw. or 734,000 kw higher than that actually obtained. This indicates that the completion of some plants has been delayed until 1965. The 1964 capability was significantly below the 1963 forecast in Ontario, Manitoba, Alberta and British Columbia.

The largest absolute growths in generating capability for the five forecast years are indicated for Quebec - 3,683,000 kw; Ontario, 3,517,000 kw; British Columbia 1,752,000 kw, and Alberta 822,000 kw. Eighty-five per cent of the increased generating capability in Quebec will be hydro capability. Ontario plans to increase its capability by adding 398,000 kw hydro and 3,119,000 kw in thermal capability, including 200,000 kw nuclear. British Columbia is forecasting an increase of 1,374,000 kw in hydro capability and 378,000 kw in thermal capability while Alberta estimates increases of 340,000 kw and 482,000 kw in hydro and thermal capability respectively.

In the period from 1954 to 1964 the growth rate of firm power peak load in Canada was 7.08 per cent. This growth rate is expected to drop slightly to 6.92 per cent during the forecast years 1964 to 1969. During the forecast period the indicated reserve is expected to increase from 3,379,000 kw in 1964 to 5,959,000 kw in 1969. The indicated reserve, stated as a percentage of firm power peak load, amounted to 14.9 per cent in 1964 and is forecast to reach 18.9 per cent in 1969.

Indicated reserve data does not take into account reduction in generating capability due to adverse flow conditions such as ice, low water, etc., which occur during the peak load season. In 1964, this reduction in generating capability amounted to about 690,000 kw with Quebec accounting for 68.9 per cent, Ontario 28.0 per cent, Newfoundland 1.8 per cent and British Columbia 1.3 per cent.

Firm energy requirements increased 10.3 per cent from 117,254 million kwh. in 1963 to 129,362 million kwh. in 1964 compared with a growth of 6.8 per cent in the previous ten year period and a forecast growth rate of 6.6 per cent for the period 1964-1969. The additional firm energy requirement was supplied by an increase in net generation of 12,632 million kwh. Net exports increased by 508 million kwh in 1964 and secondary energy delivered within Canada rose by 16 million kwh.

### Concepts and Definitions

Table 1. Capability, Firm Power Peak Load and Energy Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may differ from the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plate capacity, the impossibility of placing all pieces of equipment on the line at the same time, low water, ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1 of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sum of the actual peak loads regardless of time of occurrence) and may be equal to, or greater than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty major systems serving Canada, nine had peak loads on December 21, eight on other dates between November 30 and December 31 and thirteen outside this period.

Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages (line 15, Table 1) are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies.

Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1964, are subdivided by type of generation. No forecasts of generation are given for 1965-69.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts or obligations.

Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

Indicated shortage (line 38, Table 1) is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

CHART — A

# TOTAL GENERATING CAPABILITY WITHIN CANADA

1954 — 1969

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS

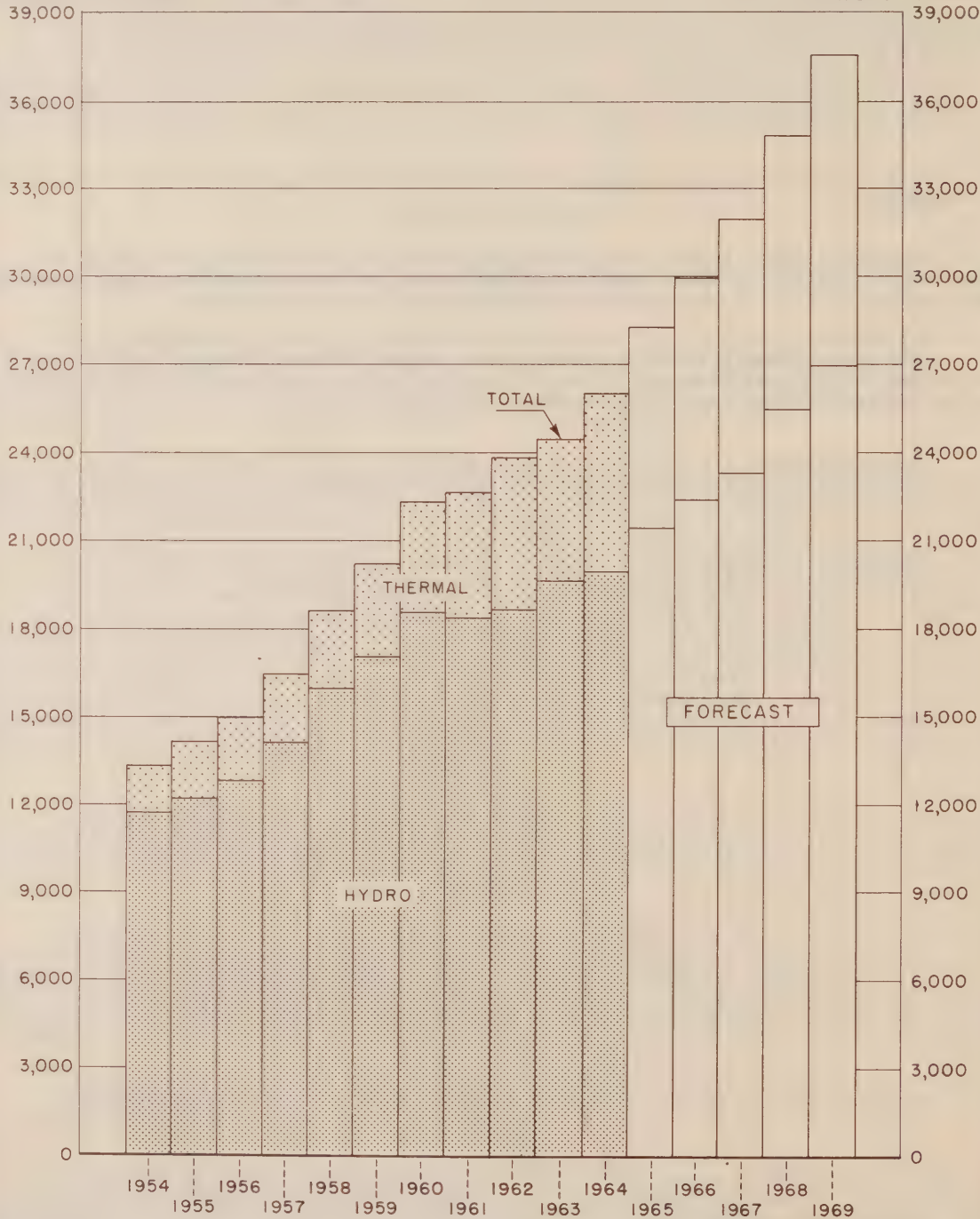




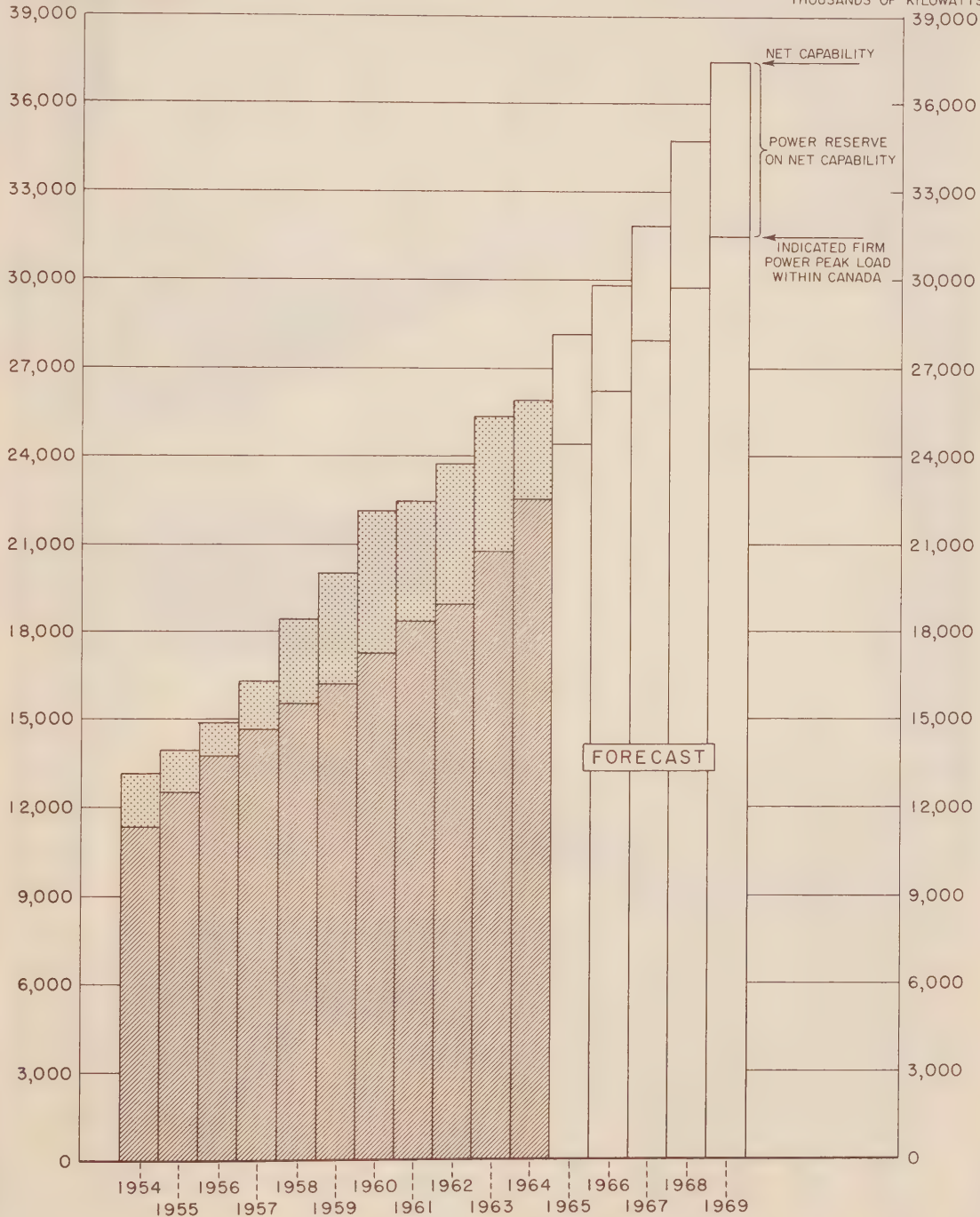
CHART — B

# NET CAPABILITY AND PEAK LOADS WITHIN CANADA

1954 — 1969

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS

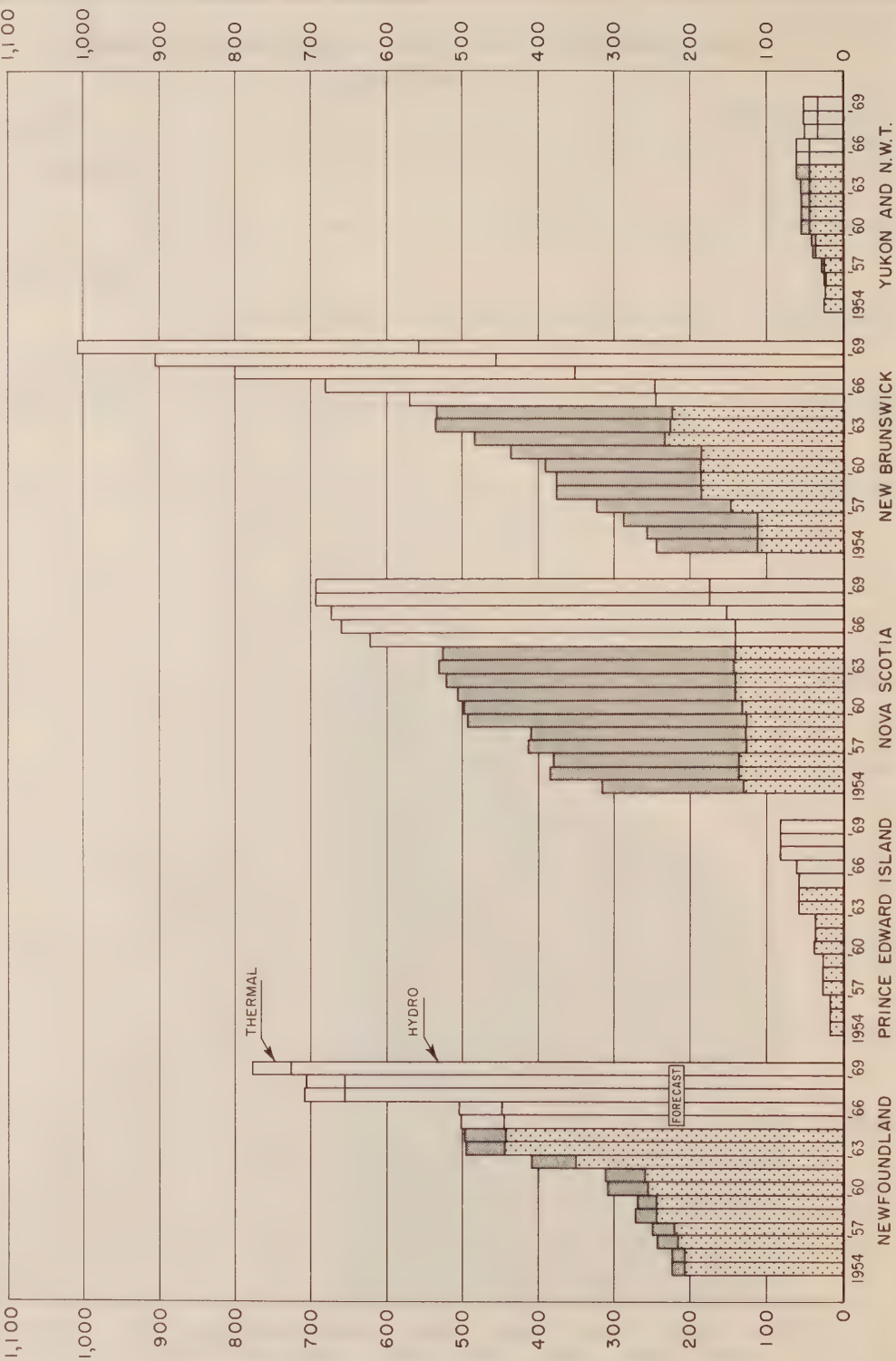




## NET GENERATING CAPABILITY WITHIN PROVINCES

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS  
1,100



# NET GENERATING CAPABILITY WITHIN PROVINCES

1954 — 1969

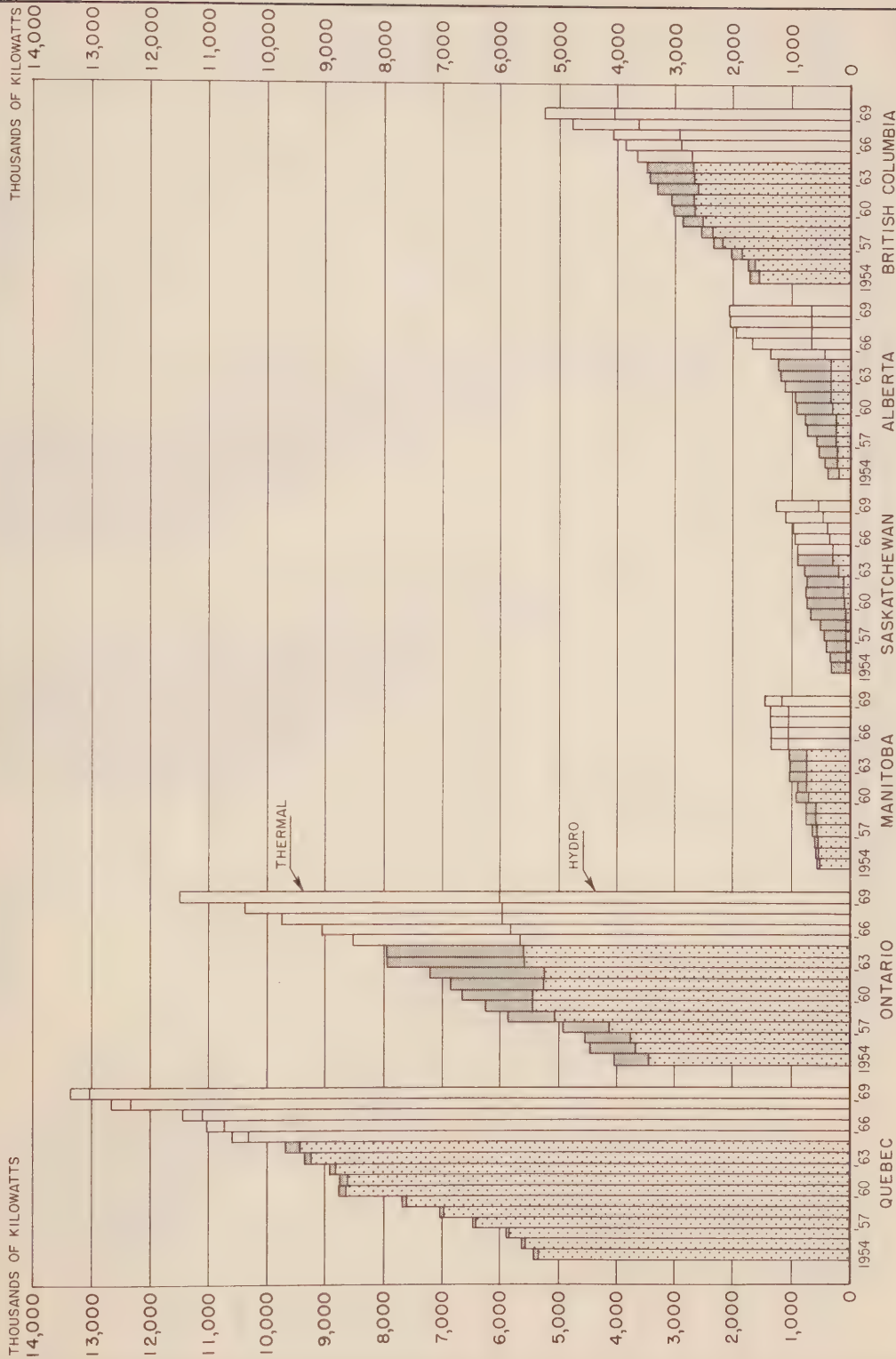
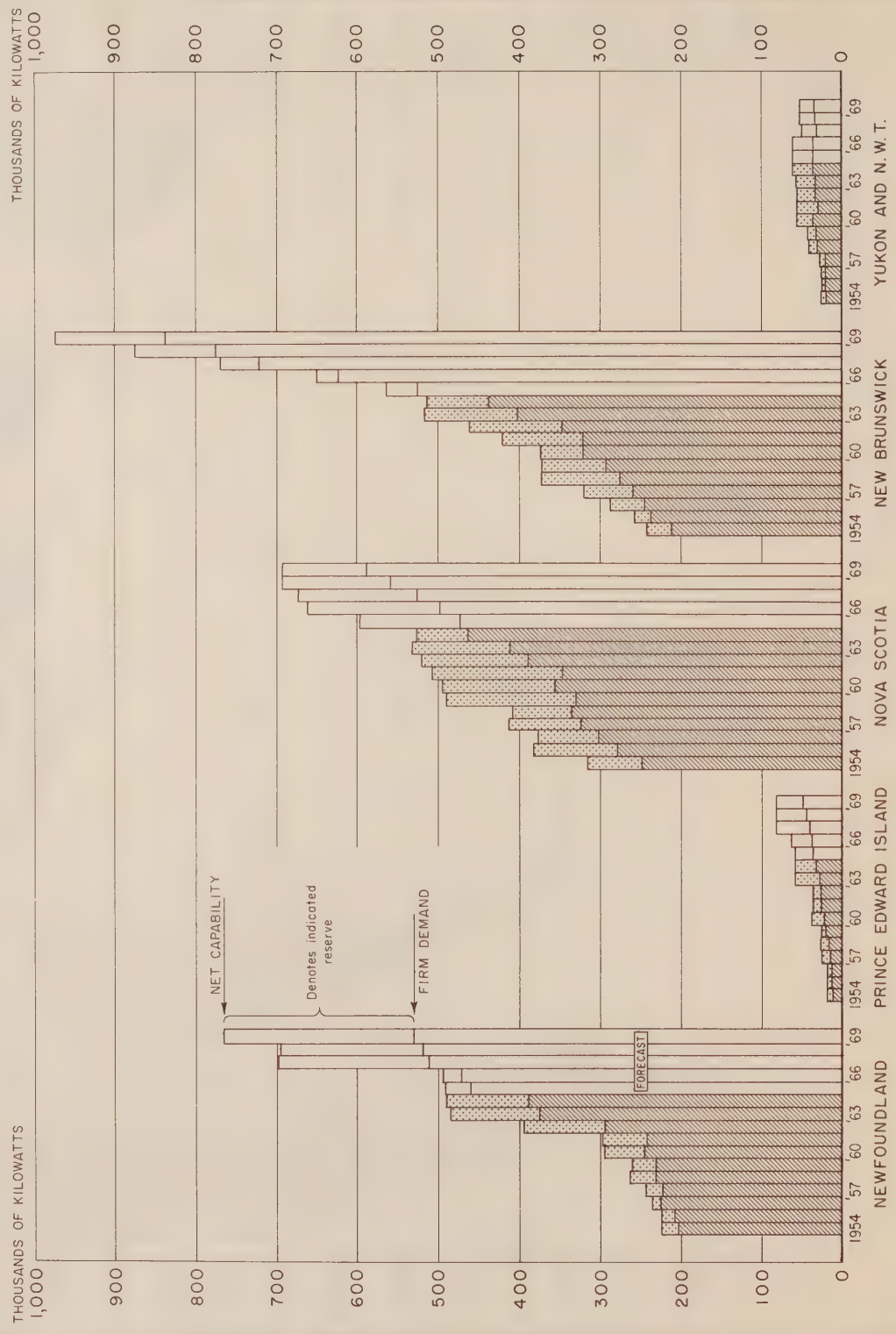


CHART — D

# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1954 — 1969



# NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1954 — 1969

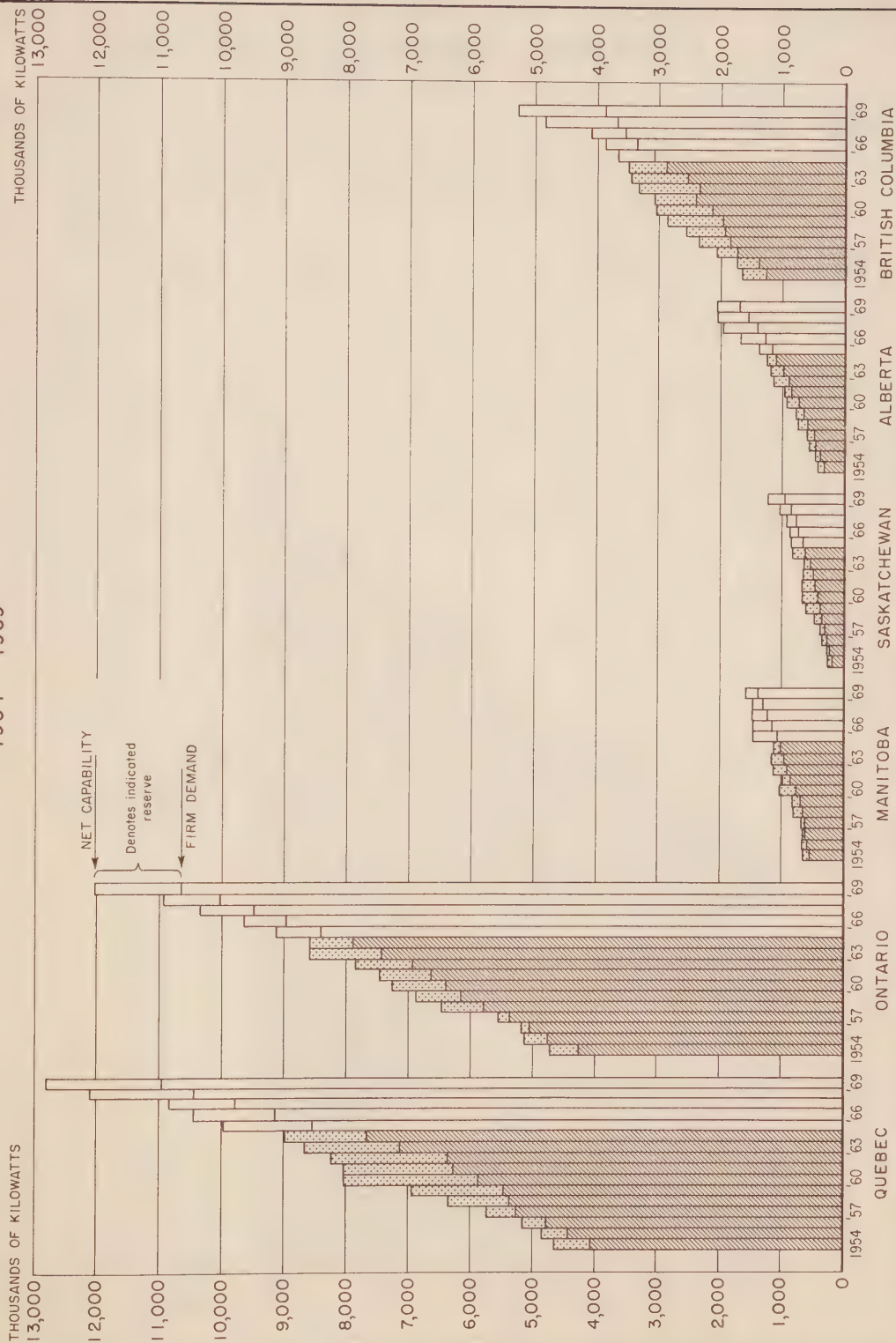




CHART — E

## FIRM ENERGY REQUIREMENT WITHIN CANADA

1954 — 1969

BILLIONS OF KILOWATT-HOURS

BILLIONS OF KILOWATT-HOURS

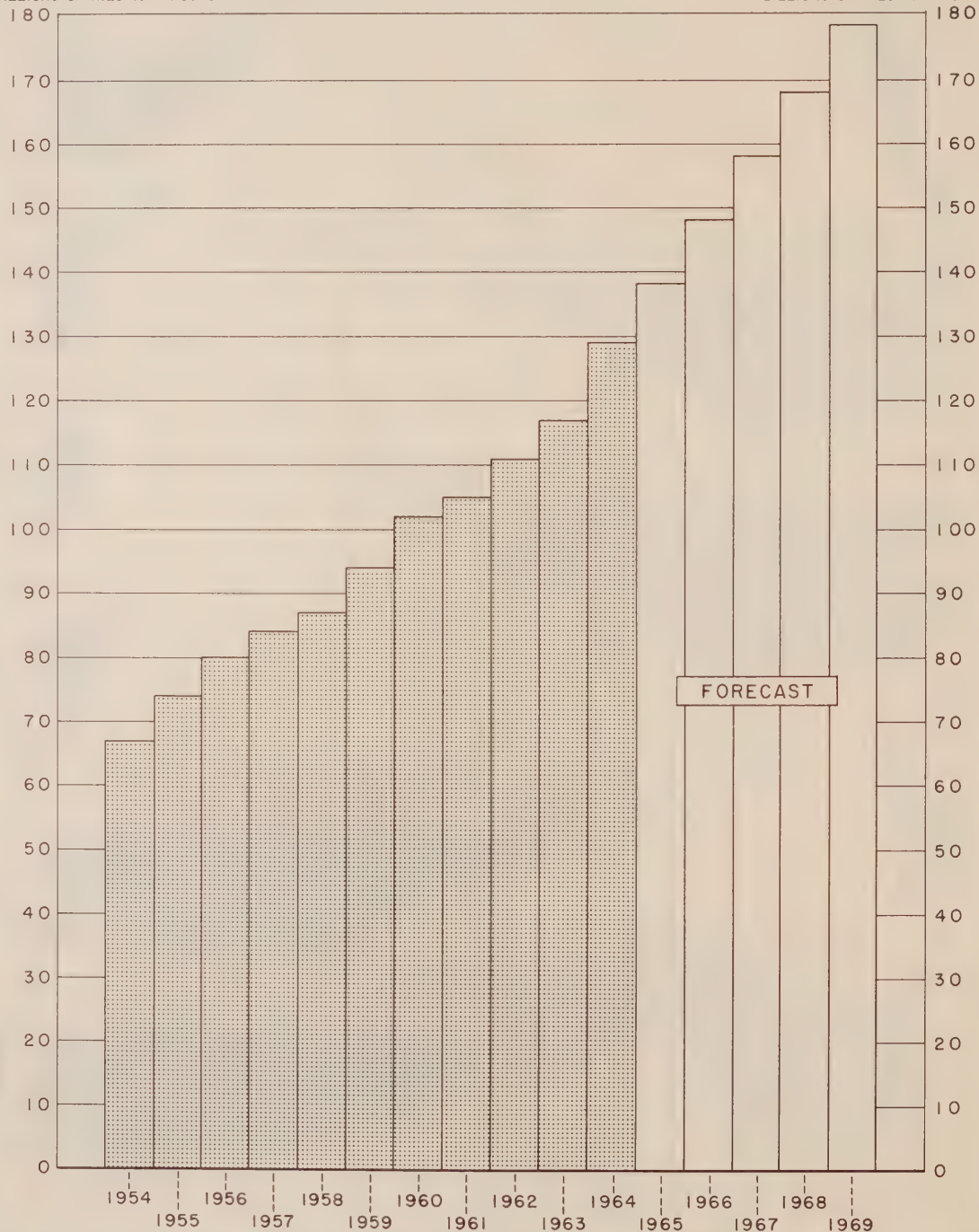






TABLE 1. Capacity, Firm Power Peak Load, and Energy Requirements

Capacity and peak load											
Actual						Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	11,719	18,516	18,389	18,651	19,666	19,964	21,293	22,259	22,886	25,058	26,551
2. Steam - Conventional)		( 3,773 <sup>r</sup>	( 4,596	5,194	5,422	5,422	6,348	6,976	8,146	8,869	10,096
3. Nuclear ) .....	1,609	3,824	( 240	251	236	255	260	268	271	275	279
4. Internal combustion )		( 351	371	382	384	384	384	441	441	442	442
5. Gas turbine )											
6. Total net generating capability .....	13,328	22,340	22,753 <sup>r</sup>	23,869	25,478	26,025	28,285	29,944	31,944	34,844	37,568
Receipts of firm power from:											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States .....	4	-	2	4	2	2	2	2	2	2	2
9. Total receipts .....	4	-	2	4	2	2	2	2	2	2	2
Deliveries of firm power to:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States .....	176	166	146	121	122	129	92	94	96	100	104
12. Total deliveries .....	176	166	146	121	122	129	92	94	96	100	104
13. Total net capability (6 + 9 - 12) .....	13,156	22,174	22,609 <sup>r</sup>	23,752	25,358	25,898	28,195	29,852	31,850	34,746	37,466
Peak loads:											
14. Firm power peak load within province .....	11,355	17,264	18,353	18,972	20,757	22,506	24,392	26,176	27,926	29,681	31,440
15. Indicated shortages .....	4	-	-	-	28	13	30	45	53	59	67
16. Total indicated firm power peak load within province (14 + 15) .....	11,359	17,264	18,353	18,972	20,785	22,519	24,422	26,221	27,979	29,740	31,507
17. Firm power peak load on province (12 + 16) .....	11,535	17,430	18,499	19,093	20,907	22,648	24,514	26,315	28,075	29,840	31,611
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	1,797	4,910	4,256 <sup>r</sup>	4,780	4,573	3,379	3,773	3,631	3,871	5,006	5,959
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	779	687	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual							Forecast				
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
				millions of kilowatt-hours								
Net generation by:												
19.	Hydro-electric .....	..	105,770	103,692	103,695	103,539	113,212	...	...	...	...	
20.	Steam - Conventional)		(	8,822	12,543	17,111	20,051	...	...	...	...	
21.	Nuclear )		(	-	22	87	141	...	...	...	...	
	.....)	..	8,271	(	509	593	588	...	...	...	...	
22.	Internal combustion )		(	509	514	593	588	...	...	...	...	
23.	Gas turbine )		(	248	257	312	282	...	...	...	...	
24.	Total net generation .....	..	114,041	113,271	117,031	121,642	134,274	...	...	...	...	
Receipts of energy from:												
	(a) Firm:											
25.	Other provinces .....	...	...	...	...	...	...	...	...	...	...	
26.	United States .....	..	..	8	22	12	6	2	2	2	2	
	(b) Secondary:											
27.	Other provinces .....	...	...	...	...	...	...	...	...	...	...	
28.	United States .....	..	..	1,392	2,764	2,867	2,971	...	...	...	...	
29.	Total receipts of energy .....	..	367	1,400	2,786	2,879	2,977	...	...	...	...	
Deliveries of energy to:												
	(a) Firm:											
30.	Other provinces .....	...	...	...	...	...	...	...	...	...	...	
31.	United States .....	1,357	1,283	1,122	817	858	1,024	829	714	703	713	
	(b) Secondary:											
32.	Other provinces .....	...	...	...	...	...	...	...	...	...	...	
33.	United States .....	..	4,228	3,058	3,267	2,754	3,194	...	...	...	...	
34.	Total deliveries of energy .....	..	5,511	4,180	4,084	3,612	4,218	...	...	...	...	
35.	Total energy available (24 + 29 - 34)	..	108,897	110,491	115,733	120,909	133,033	...	...	...	...	
36.	Secondary energy delivered within Canada .....	..	6,615	5,415	4,690	3,655	3,671	...	...	...	...	
37.	Firm energy available within Canada (35 - 36) ....	67,317	102,282	105,076	111,043	117,254	129,362	138,282	148,380	158,061	167,626	
38.	Indicated shortage .....	11	-	-	-	-	-	-	-	-	-	
39.	Firm energy requirement within Canada (37 + 38) ..	67,328	102,282	105,076	111,043	117,254	129,362	138,282	148,380	158,061	167,626	
40.	Firm energy requirement on Canada (30 + 31 + 39)	68,685	103,565	106,198	111,860 <sup>F</sup>	118,112	130,386	139,111	149,094	158,764	168,339	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load							Forecast					
thousands of kilowatts												
Actual												
Forecast												
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TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded												
Energy	Actual						Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
millions of kilowatt-hours												
Net generation by:												
19. Hydro-electric .....	..	1,403	1,322	1,556	1,930	2,278	...	...	...	...	...	
20. Steam - Conventional )		(	116	101	96	98	...	...	...	...	...	
21. Nuclear )		(	-	-	-	-	...	...	...	...	...	
22. Internal combustion )	..	76	(	-	-	-	...	...	...	...	...	
23. Gas turbine )		(	10	9	8	12	...	...	...	...	...	
24. Total net generation .....	..	1,479	1,448	1,666	2,034	2,388	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	-	-	-	-	-	-	-	-	-	
26. United States .....	..	..	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
27. Other provinces .....	..	..	-	-	-	-	...	...	...	...	...	
28. United States .....	..	..	-	-	-	-	...	...	...	...	...	
29. Total receipts of energy .....	..	..	-	-	-	-	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	-	49	80	81	36	54	55	55	55	55	55	
31. United States .....	-	-	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
32. Other provinces .....	..	36	3	-	37	30	...	...	...	...	...	
33. United States .....	..	..	-	-	-	-	...	...	...	...	...	
34. Total deliveries of energy .....	..	85	83	81	73	84	...	...	...	...	...	
35. Total energy available (24 + 29 - 34) ..	..	1,394	1,365	1,585	1,961	2,304	...	...	...	...	...	
36. Secondary energy delivered within province .....	..	74	4	112	83	11	...	...	...	...	...	
37. Firm energy available within province (35 - 36) ..	1,225	1,320	1,361	1,473	1,878	2,293	2,678	2,719	3,049	3,086	3,152	
38. Indicated shortage .....	9	-	-	-	-	-	-	-	-	-	-	
39. Firm energy requirement within province (37 + 38)	1,234	1,320	1,361	1,473	1,878	2,293	2,678	2,719	3,049	3,086	3,152	
40. Firm energy requirement on province (30 + 31 + 39)	1,234	1,369	1,441	1,554	1,914	2,347	2,733	2,774	3,104	3,141	3,207	



## Prince Edward Island

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
	thousands of kilowatts											
Capability:												
Net generating capability:												
1. Hydro-electric .....	-	-	-	-	-	-	-	-	-	-	-	
2. Steam - Conventional)			( 32	32	51	51	51	51	71	71	71	
3. Nuclear ) .....	18	38	(	-	-	-	-	-	-	-	-	
4. Internal combustion )			( 5	5	7	7	7	10	10	10	10	
5. Gas turbine			(	-	-	-	-	-	-	-	-	
6. Total net generating capability .....	18	38	37	37	58	58	58	61	81	81	81	
Receipts of firm power from:												
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-	
8. United States .....	-	-	-	-	-	-	-	-	-	-	-	
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-	
Deliveries of firm power to:												
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-	
11. United States .....	-	-	-	-	-	-	-	-	-	-	-	
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-	-	
13. Total net capability (6 + 9 - 12) .....	18	38	37	37	58	58	58	61	81	81	81	
Peak loads:												
14. Firm power peak load within province .....	11	21	24	25	27	31	34	36	40	43	48	
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-	
16. Total indicated firm power peak load within province (14 + 15) .....	11	21	24	25	27	31	34	36	40	43	48	
17. Firm power peak load on province (12 + 16)	11	21	24	25	27	31	34	36	40	43	48	
Indicated reserve:												
18. Indicated reserve (13 - 16) .....	7	17	13	12	31	27	24	25	41	38	33	
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	-	-	...	...	...	...	...	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	-	-	-	-	-	...	...	...	...	...
20. Steam - Conventional)			( 81	93	102	119	...	...	...	...	...
21. Nuclear )		79	( -	-	-	-	...	...	...	...	...
22. Internal combustion )			( 7	8	9	5	...	...	...	...	...
23. Gas turbine )			( -	-	-	-	...	...	...	...	...
24. Total net generation .....	..	79	88	101	111	124	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	-	-	-	-	-	-	-	-	-
26. United States .....	..	..	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	..	-	-	-	-	...	...	...	...	...
28. United States .....	..	..	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	..	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
31. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	79	88	101	111	124	...	...	...	...	...
36. Secondary energy delivered within province .....											
37. Firm energy available within province (35 - 36) ..	46	79	88	101	111	124	139	155	173	193	212
38. Indicated shortage .....											
39. Firm energy requirement within province (37 + 38)	46	79	88	101	111	124	139	155	173	193	212
40. Firm energy requirement on province (30 + 31 + 39)	46	79	88	101	111	124	139	155	173	193	212

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	thousands of kilowatts										
Capability:											
Net generating capability:											
1. Hydro-electric .....	130	132	141	141	143	141	141	141	152	173	173
2. Steam - Conventional)			( 365	378	387	383	478	516	516	516	516
3. Nuclear ) .....	188	367	(	-	-	-	-	-	-	-	-
4. Internal combustion ) .....			( 2	2	2	3	3	3	3	3	3
5. Gas turbine ) .....			(	-	-	-	-	-	-	-	-
6. Total net generating capability .....	318	499	508	521	532	527	622	660	671	692	692
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	2	3	1	1	1	1	25	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	2	3	1	1	1	1	25	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	316	496	507	520	531	526	597	660	671	692	692
Peak loads:											
14. Firm power peak load within province .....	245	356	347	388	411	462	473	499	526	558	588
15. Indicated shortages .....	3	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	248	356	347	388	411	462	473	499	526	558	588
17. Firm power peak load on province (12 + 16)	250	359	348	389	412	463	498	499	526	558	588
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	68	140	160	132	120	64	124	161	145	134	104
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	..	-	-	...	...	...	...	...

	Actual							Forecast			
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Energy											
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	632	549	710	799	718	...	...	...	...	...
20. Steam - Conventional)							...	...	...	...	...
21. Nuclear )			( 1,301	1,300	1,313	1,662	...	...	...	...	...
22. Internal combustion )			( 1,162	-	-	-	...	...	...	...	...
23. Gas turbine )			( -	-	-	-	...	...	...	...	...
24. Total net generation .....	..	1,794	1,850	2,010	2,112	2,380	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	16	-	-	-	-	-	-	-	-
26. United States .....	..	..	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	..	-	67	57	43	...	...	...	...	...
28. United States .....	..	..	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	..	16	67	57	43	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	7	80	12	7	8	7	186	-	-	-	-
31. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	-	-	79	101	60	113	...	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	80	91	108	68	120	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	1,714	1,775	1,969	2,101	2,303	...	...	...	...	...
36. Secondary energy delivered within province .....	..	-	-	4	1	2	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	1,253	1,714	1,775	1,965	2,100	2,301	2,430	2,597	2,758	2,927	3,115
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	1,253	1,714	1,775	1,965	2,100	2,301	2,430	2,597	2,758	2,927	3,115
40. Firm energy requirement on province (30 + 31 + 39)	1,260	1,794	1,787	1,972	2,108	2,308	2,616	2,597	2,758	2,927	3,115

New Brunswick

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
	thousands of kilowatts											
Capability:												
Net generating capability:												
1. Hydro-electric .....	112	186	185	233	224	222	244	245	350	456	558	
2. Steam - Conventional)		(	243	240	304	305	317	427	443	443	443	
3. Nuclear ) .....	132	202	(	(	(	(	(	(	(	(	(	
4. Internal combustion ) .....		(	8	7	7	7	7	7	7	7	7	
5. Gas turbine ) .....		(	(	(	(	(	(	(	(	(	(	
6. Total net generating capability .....	244	388	436	480	535	534	568	679	800	906	1,008	
Receipts of firm power from:												
7. Other provinces .....	2	7	6	6	5	9	33	9	9	10	11	
8. United States .....	-	-	-	2	2	2	2	2	2	2	2	
9. Total receipts .....	2	7	6	8	7	11	35	11	11	12	13	
Deliveries of firm power to:												
10. Other provinces .....	-	-	-	-	-	2	2	2	2	2	2	
11. United States .....	5	23	22	28	28	31	38	39	40	43	46	
12. Total deliveries .....	5	23	22	28	28	33	40	41	42	45	48	
13. Total net capability (6 + 9 - 12) .....	241	372	420	460	514	512	563	649	769	873	973	
Peak loads:												
14. Firm power peak load within province .....	210	319	319	347	401	437	523	621	720	773	835	
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-	
16. Total indicated firm power peak load within province (14 + 15) .....	210	319	319	347	401	437	523	621	720	773	835	
17. Firm power peak load on province (12 + 16)	215	342	341	375	429	470	563	662	762	818	883	
Indicated reserve:												
18. Indicated reserve (13 - 16) .....	31	53	101	113	113	75	40	28	49	100	138	
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	..	-	-	...	...	...	...	...	



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual					Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	887	994	1,191	1,272	1,019	...	...	...	...	...
20. Steam - Conventional)		(	870	895	1,019	1,525	...	...	...	...	...
21. Nuclear )		(	-	-	-	-	...	...	...	...	...
22. Internal combustion )	..	842	(	(	(	4	...	...	...	...	...
23. Gas turbine )		(	18	2	5	-	...	...	...	...	...
24. Total net generation .....	..	1,729	1,882	2,088	2,296	2,548	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	31	28	29	32	213	29	31	34	37
26. United States .....	..	..	-	14	12	3	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	..	79	101	60	113	...	...	...	...	...
28. United States .....	..	..	14	3	2	3	...	...	...	...	...
29. Total receipts of energy .....	..	111	124	146	103	151	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	-	-	-	-	-	1	1	1	1	1	1
31. United States .....	59	58	125	166	178	163	235	130	130	130	130
(b) Secondary:											
32. Other provinces .....	..	-	16	67	57	43	...	...	...	...	...
33. United States .....	..	107	78	84	68	82	...	...	...	...	...
34. Total deliveries of energy .....	..	165	219	317	303	289	...	...	...	...	...
35. Total energy available (24 + 29 - 34) ..	..	1,675	1,787	1,917	2,096	2,410	...	...	...	...	...
36. Secondary energy delivered within province .....											
37. Firm energy available within province (35 - 36) ..	1,199	1,674	1,782	1,912	2,095	2,410	2,921	3,415	3,895	4,165	4,464
38. Indicated shortage .....											
39. Firm energy requirement within province (37 + 38)	1,199	1,674	1,782	1,912	2,095	2,410	2,921	3,415	3,895	4,165	4,464
40. Firm energy requirement on province (30 + 31 + 39)	1,258	1,732	1,907	2,078	2,273	2,574	3,157	3,546	4,026	4,296	4,595

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements												
Quebec	Capability and peak load	Actual						Forecast				
		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
		thousands of kilowatts										
<u>Capability:</u>												
Net generating capability:												
1.	Hydro-electric .....	5,378	8,658	8,628	8,830	9,271	9,453	10,196	10,594	10,668	11,900	12,593
2.	Steam - Conventional) .....			( 59	41	59	192	359	371	699	699	-
3.	Nuclear ) .....			( -	-	-	-	-	-	-	-	-
4.	Internal combustion ) .....	35	106	( 15	12	10	15	15	15	15	15	15
5.	Gas turbine ) .....			( 36	36	36	36	36	72	72	72	72
6.	Total net generating capability .....	5,413	8,764	8,738	8,919	9,376	9,696	10,606	11,052	11,454	12,686	13,379
<u>Receipts of firm power from:</u>												
7.	Other provinces .....	1	16	19	15	12	18	19	19	20	20	21
8.	United States .....	4	-	2	2	-	-	-	-	-	-	-
9.	Total receipts .....	5	16	21	17	12	18	19	19	20	20	21
<u>Deliveries of firm power to:</u>												
10.	Other provinces .....	719	698	696	697	703	717	635	636	636	594	595
11.	United States .....	56	57	38	4	6	-	-	-	-	-	-
12.	Total deliveries .....	775	755	734	701	709	717	635	636	636	594	595
13.	Total net capability (6 + 9 - 12) .....	4,643	8,025	8,025	8,235	8,679	8,997	9,990	10,435	10,838	12,112	12,805
<u>Peak loads:</u>												
14.	Firm power peak load within province .....	4,092	5,871	6,258	6,370	7,118	7,654	8,517	9,139	9,791	10,406	10,967
15.	Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16.	Total indicated firm power peak load within province (14 + 15) .....	4,092	5,871	6,258	6,370	7,118	7,654	8,517	9,139	9,791	10,406	10,967
17.	Firm power peak load on province (12 + 16) .....	4,867	6,626	6,992	7,071	7,827	8,371	9,152	9,775	10,427	11,000	11,562
<u>Indicated reserve:</u>												
18.	Indicated reserve (13 - 16) .....	551	2,154	1,767	1,865	1,561	1,343	1,473	1,296	1,047	1,706	1,838
18a.	Reduction in generating capability due to adverse conditions .....	..	..	..	..	435	474	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy							Actual					Forecast				
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969					
	millions of kilowatt-hours															
Net generation by:																
19. Hydro-electric .....	..	50,000	49,432	49,799	49,454	56,268	...	...	...	...	...					
20. Steam - Conventional)		(	276	288	320	424	...	...	...	...	...					
21. Nuclear )		(	-	-	-	-	...	...	...	...	...					
22. Internal combustion )	..	273	(	7	44	6	...	...	...	...	...					
23. Gas turbine )		(	11	29	1	1	...	...	...	...	...					
24. Total net generation .....	..	50,273	49,726	50,129	49,819	56,699	...	...	...	...	...					
Receipts of energy from:																
(a) Firm:																
25. Other provinces .....	..	..	87	110	44	83	83	85	86	89	91					
26. United States .....	..	..	7	7	-	1	1	1	1	1	1					
(b) Secondary:																
27. Other provinces .....	..	..	16	-	99	45	...	...	...	...	...					
28. United States .....	..	..	-	-	-	-	...	...	...	...	...					
29. Total receipts of energy .....	..	103	110	117	143	129	...	...	...	...	...					
Deliveries of energy to:																
(a) Firm:																
30. Other provinces .....	4,331	4,193	4,207	3,964	3,975	4,371	4,386	4,016	4,018	3,839	3,834					
31. United States .....	490	496	353	14	6	7	7	8	8	9	9					
(b) Secondary:																
32. Other provinces .....	..	1,723	1,649	1,963	1,004	2,648	...	...	...	...	...					
33. United States .....	..	62	54	294	261	40	...	...	...	...	...					
34. Total deliveries of energy .....	..	6,474	6,263	6,235	5,246	7,066	...	...	...	...	...					
35. Total energy available (24 + 29 - 34) ..	..	43,902	43,573	44,011	44,716	49,762	...	...	...	...	...					
36. Secondary energy delivered within province .....	..	5,350	4,551	3,622	2,613	2,672	...	...	...	...	...					
37. Firm energy available within province (35 - 36) ..	27,954	38,552	39,022	40,389	42,103	47,090	49,704	52,724	56,203	59,637	63,357					
38. Indicated shortage .....	1	-	-	-	-	-	-	-	-	-	-					
39. Firm energy requirement within province (37 + 38)	27,955	38,552	39,022	40,389	42,103	47,090	49,704	52,724	56,203	59,637	63,357					
40. Firm energy requirement on province (30 + 31 + 39)	32,776	43,241	43,582	44,367	46,084	51,468	54,097	56,748	60,229	63,485	67,200					

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Ontario	Actual							Forecast			
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Capability and peak load											
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric .....	3,481	5,464	5,292	5,285	5,601	5,603	5,666	5,802	5,986	5,986	6,001
2. Steam - Conventional)			( 1,555	1,926	2,376	2,379	2,879	3,264	3,579	4,209	5,295
3. Nuclear ) .....	607	1,186	( -	-	-	-	-	-	200	200	200
4. Internal combustion ) .....			( 11	12	12	8	8	9	11	11	11
5. Gas turbine ) .....			( -	-	-	-	-	-	-	-	-
6. Total net generating capability .....	4,088	6,650	6,858	7,223	7,989	7,990	8,553	9,075	9,776	10,406	11,507
Receipts of firm power from:											
7. Other provinces .....	732	694	695	692	699	709	627	627	627	584	584
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	732	694	695	692	699	709	627	627	627	584	584
Deliveries of firm power to:											
10. Other provinces .....	1	2	5	2	2	8	8	8	9	9	10
11. United States .....	85	86	86	89	88	98	54	55	56	57	58
12. Total deliveries .....	86	88	91	91	90	106	62	63	65	66	68
13. Total net capability (6 + 9 - 12) .....	4,734	7,256	7,462	7,824	8,598	8,593	9,118	9,639	10,338	10,924	12,023
Peak loads:											
14. Firm power peak load within province .....	4,261	6,391	6,615	6,913	7,412	7,897	8,399	8,959	9,471	10,035	10,657
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	4,261	6,391	6,615	6,913	7,412	7,897	8,399	8,959	9,471	10,035	10,657
17. Firm power peak load on province (12 + 16)	4,347	6,479	6,706	7,004	7,502	8,003	8,461	9,022	9,536	10,101	10,725
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	473	865	847	911	1,186	696	719	680	867	889	1,366
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	321	192	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

TABLE I. Capability, Firm Power Peak Load, and Energy Requirements - Concluded													
Energy	Actual					Forecast							
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969		
millions of kilowatt-hours													
Net generation by:													
19. Hydro-electric .....	..	34,870	33,654	30,872	29,099	30,150	...	...	...	...	...		
20. Steam - Conventional)			( 1,187	4,335	8,291	9,313	...	...	...	...	...		
21. Nuclear )		822	( -	22	87	141	...	...	...	...	...		
22. Internal combustion )	..		( 31	29	24	22	...	...	...	...	...		
23. Gas turbine )			( -	1	-	-	...	...	...	...	...		
24. Total net generation .....	..	35,692	34,872	35,259	37,501	39,626	...	...	...	...	...		
Receipts of energy from:													
(a) Firm:													
25. Other provinces .....	..	..	4,186 <sup>F</sup>	3,943	3,954	4,346	4,359	3,987	3,987	3,805	3,797		
26. United States .....	..	..	-	-	-	-	-	-	-	-	-		
(b) Secondary:													
27. Other provinces .....	..	..	1,651 <sup>F</sup>	2,009	1,008	2,680	...	...	...	...	...		
28. United States .....	..	..	1,362	2,704	2,846	2,907	...	...	...	...	...		
29. Total receipts of energy .....	..	6,182	7,199	8,656	7,808	9,933	...	...	...	...	...		
Deliveries of energy to:													
(a) Firm:													
30. Other provinces .....	3	6	7	7	8	28	27	29	30	33	35		
31. United States .....	624	727	642	635	672	852	585	574	563	571	558		
(b) Secondary:													
32. Other provinces .....	..	131	275	221	257	255	...	...	...	...	...		
33. United States .....	..	4,043	2,909	2,875	2,406	3,042	...	...	...	...	...		
34. Total deliveries of energy .....	..	4,907	3,833	3,738	3,343	4,177	...	...	...	...	...		
35. Total energy available (24 + 29 - 34)	..	36,967	38,238	40,177	41,966	45,382	...	...	...	...	...		
36. Secondary energy delivered within province .....	..	585	511	546	437	568	...	...	...	...	...		
37. Firm energy available within province (35 - 36) ..	23,928	36,382	37,727	39,631	41,529	44,814	47,742	51,161	54,044	57,462	60,790		
38. Indicated shortage .....	1	-	-	-	-	-	-	-	-	-	-		
39. Firm energy requirement within province (37 + 38)	23,929	36,382	37,727	39,631	41,529	44,814	47,742	51,161	54,044	57,462	60,790		
40. Firm energy requirement on province (30 + 31 + 39)	24,556	37,115	38,376	40,273	42,209	45,694	48,354	51,764	54,637	58,066	61,383		



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements											
Manitoba	Capability and peak load						Forecast				
	Actual										
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	thousands of kilowatts										
Capability:											
Net generating capability:											
1. Hydro-electric .....	522	701	735	735	735	735	1,061	1,061	1,061	1,061	1,171
2. Steam - Conventional)		( 291 <sup>r</sup>	291	291	291	291	291	291	291	291	291
3. Nuclear )	46	231	( -	-	-	-	-	-	-	-	-
4. Internal combustion )		( 4	7	7	8	8	8	8	9	9	11
5. Gas turbine )		( -	-	-	-	-	-	-	-	-	-
6. Total net generating capability .....	568	932	1,030 <sup>r</sup>	1,033	1,033	1,034	1,360	1,360	1,361	1,361	1,473
Receipts of firm power from:											
7. Other provinces .....	80	86	83	87	134	94	85	85	85	85	85
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	80	86	83	87	134	94	85	85	85	85	85
Deliveries of firm power to:											
10. Other provinces .....	13	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	13	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	635	1,018	1,113 <sup>r</sup>	1,120	1,167	1,128	1,445	1,445	1,446	1,446	1,558
Peak loads:											
14. Firm power peak load within province .....	533	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	533	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370
17. Firm power peak load on province (12 + 16)	546	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	102	246	264 <sup>r</sup>	213	212	124	367	303	231	153	188
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	-	-	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy		Actual						Forecast				
		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
millions of kilowatt-hours												
Net generation by:												
19.	Hydro-electric .....	..	3,735	3,591	4,220	4,736	4,799	...	...	...	...	...
20.	Steam - Conventional)		(	238	120	61	148	...	...	...	...	...
21.	Nuclear )		(	-	-	-	-	...	...	...	...	...
22.	Internal combustion )	..	75	(	11	12	13	28	...	...	...	...
23.	Gas turbine )		(	-	-	-	-	-	...	...	...	...
24.	Total net generation .....	..	3,810	3,840	4,352	4,810	4,975	...	...	...	...	...
Receipts of energy from:												
(a) Firm:												
25.	Other provinces .....	..	..	623	647	687	651	650	650	650	650	650
26.	United States .....	..	..	-	-	-	-	-	-	-	-	-
(b) Secondary:												
27.	Other provinces .....	..	..	301	199	198	249	...	...	...	...	...
28.	United States .....	..	..	-	-	-	-	...	...	...	...	...
29.	Total receipts of energy .....	..	739	924	846	885	900	...	...	...	...	...
Deliveries of energy to:												
(a) Firm:												
30.	Other provinces .....	114	-	- <sup>r</sup>	- <sup>r</sup>	-	-	-	-	-	-	-
31.	United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:												
32.	Other provinces .....	..	4	6 <sup>r</sup>	75 <sup>r</sup>	65	49	...	...	...	...	...
33.	United States .....	..	-	-	-	-	-	...	...	...	...	...
34.	Total deliveries of energy .....	..	4	6	75	65	49	...	...	...	...	...
35.	Total energy available (24 + 29 - 34)	..	4,545	4,758	5,123	5,630	5,826	...	...	...	...	...
Secondary energy delivered within province .....												
36.	Firm energy available within province (35 - 36) ..	2,886	4,201	4,698	5,003	5,445	5,673	6,023	6,347	6,731	7,068	7,440
38.	Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39.	Firm energy requirement within province (37 + 38)	2,886	4,201	4,698	5,003	5,445	5,673	6,023	6,347	6,731	7,068	7,440
40.	Firm energy requirement on province (30 + 31 + 39)	3,000	4,201	4,698 <sup>r</sup>	5,003 <sup>r</sup>	5,445	5,673	6,023	6,347	6,731	7,068	7,440

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Saskatchewan	Actual							Forecast			
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Capability and peak load	thousands of kilowatts										
Capability:											
Net generating capability:											
1. Hydro-electric .....	85	99	107	107	208	309	309	352	392	498	551
2. Steam - Conventional)			( 572	575	492	529	529	529	529	529	670
3. Nuclear ) .....	243	653	( -	-	-	-	-	-	-	-	-
4. Internal combustion )			( 35	37	36	35	35	35	35	35	35
5. Gas turbine )			( 43	33	39	39	39	39	39	39	39
6. Total net generating capability .....	328	752	757	752	775	912	912	955	995	1,101	1,295
Receipts of firm power from:											
7. Other provinces .....	-	1	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	1	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	80	86	88	87	134	94	85	85	85	85	85
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	80	86	88	87	134	94	85	85	85	85	85
13. Total net capability (6 + 9 - 12) .....	248	667	669	665	641	818	827	870	910	1,016	1,210
Peak loads:											
14. Firm power peak load within province .....	196	418	466	497	531	619	669	729	752	861	936
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	196	418	466	497	531	619	669	729	752	861	936
17. Firm power peak load on province (12 + 16)	276	504	554	584	665	713	754	814	837	946	1,021
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	52	249	203	168	110	199	158	141	158	155	274
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	7	-	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Saskatchewan	Energy	Actual							Forecast			
		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
		millions of kilowatt-hours										
	Net generation by:											
19.	Hydro-electric .....	..	620	658	704	985	1,369	...	...	...	...	...
20.	Steam - Conventional)			( 1,682	1,844	1,833	1,782	...	...	...	...	...
21.	Nuclear )			( -	-	-	-	...	...	...	...	...
22.	Internal combustion )	..	1,659	( 109	97	106	106	...	...	...	...	...
23.	Gas turbine )			( 62	37	49	64	...	...	...	...	...
24.	Total net generation .....	..	2,279	2,511	2,682	2,973	3,321	...	...	...	...	...
	Receipts of energy from:											
	(a) Firm:											
25.	Other provinces .....	..	..	-	-	-	-	-	-	-	-	-
26.	United States .....	..	..	-	-	-	-	-	-	-	-	-
	(b) Secondary:											
27.	Other provinces .....	..	..	6	29	62	17	...	...	...	...	...
28.	United States .....	..	..	-	-	-	-	...	...	...	...	...
29.	Total receipts of energy .....	..	6	6	29	62	17	...	...	...	...	...
	Deliveries of energy to:											
	(a) Firm:											
30.	Other provinces .....	558	575	621	647	687	651	650	650	650	650	650
31.	United States .....	-	-	-	-	-	-	-	-	-	-	-
	(b) Secondary:											
32.	Other provinces .....	..	44	41	-	4	9	...	...	...	...	...
33.	United States .....	..	-	-	-	-	-	...	...	...	...	...
34.	Total deliveries of energy .....	..	619	662	647	691	660	...	...	...	...	...
35.	Total energy available (24 + 29 - 34)	..	1,666	1,855	2,064	2,344	2,678	...	...	...	...	...
36.	Secondary energy delivered within province .....	..	-	-	-	17	20	...	...	...	...	...
37.	Firm energy available within province (35 - 36) ..	742	1,666	1,855	2,064	2,327	2,658	2,939	3,266	3,542	3,859	4,207
38.	Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39.	Firm energy requirement within province (37 + 38)	742	1,666	1,855	2,064	2,327	2,658	2,939	3,266	3,542	3,859	4,207
40.	Firm energy requirement on province (30 + 31 + 39)	1,300	2,241	2,476	2,711	3,014	3,309	3,589	3,916	4,192	4,509	4,857

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Alberta

Capability and peak load							Actual						Forecast				
							1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
							thousands of kilowatts										
Capability:																	
Net generating capability:																	
1.	Hydro-electric .....	202	318	327	327	326	326	326	326	326	326	476	666	666	666	666	666
2.	Steam - Conventional)			( 498	643	713	748	748	748	748	748	748	822	1,107	1,203	1,203	1,203
3.	Nuclear )			(	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	Internal combustion )	194	607	(	28	31	31	31	31	31	31	33	34	34	35	35	36
5.	Gas turbine )			( 100	130	130	130	130	130	130	130	130	151	151	151	152	152
6.	Total net generating capability .....	396	925	953	1,133	1,200	1,235	1,235	1,235	1,235	1,235	1,387	1,673	1,958	2,056	2,056	2,057
Receipts of firm power from:																	
7.	Other provinces .....	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	United States .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.	Total receipts .....	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:																	
10.	Other provinces .....	-	1	5	4	10	12	12	12	12	12	13	15	18	25	25	25
11.	United States .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	Total deliveries .....	-	1	5	4	10	12	12	12	12	12	13	15	18	25	25	25
13.	Total net capability (6 + 9 - 12) .....	400	927	948	1,129	1,190	1,223	1,223	1,223	1,223	1,223	1,374	1,658	1,940	2,031	2,031	2,032
Peak loads:																	
14.	Firm power peak load within province .....	313	714	836	882	984	1,106	1,106	1,106	1,106	1,106	1,160	1,274	1,399	1,532	1,696	1,696
15.	Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.	Total indicated firm power peak load within province (14 + 15) .....	313	714	836	882	984	1,106	1,106	1,106	1,106	1,106	1,160	1,274	1,399	1,532	1,696	1,696
17.	Firm power peak load on province (12 + 16)	313	715	841	886	994	1,118	1,118	1,118	1,118	1,118	1,173	1,289	1,417	1,557	1,721	1,721
Indicated reserve:																	
18.	Indicated reserve (13 - 16) .....	87	213	112	247	206	117	117	117	117	117	214	384	541	499	336	336
18a	Reduction in generating capability due to adverse conditions .....	..	..	..	..	-	-	-	-	-	-	...	...	...	...	...	...



TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
	millions of kilowatt-hours											
Net generation by:												
19. Hydro-electric .....	..	887	1,023	956	881	896	...	...	...	...	...	
20. Steam - Conventional)			( 2,534	2,900	3,294	3,770	...	...	...	...	...	
21. Nuclear )			( -	-	-	-	...	...	...	...	...	
22. Internal combustion )	..	2,540	( 51	59	60	90	...	...	...	...	...	
23. Gas turbine			( 165	187	257	209	...	...	...	...	...	
24. Total net generation .....	..	3,427	3,773	4,102	4,492	4,965	...	...	...	...	...	
Receipts of energy from:												
(a) Firm:												
25. Other provinces .....	..	..	6	23	4	1	1	1	1	1	1	
26. United States .....	..	..	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
27. Other provinces .....	..	..	30	-	23	21	...	...	...	...	...	
28. United States .....	..	..	-	-	-	-	...	...	...	...	...	
29. Total receipts of energy .....	..	30	36	23	27	22	...	...	...	...	...	
Deliveries of energy to:												
(a) Firm:												
30. Other provinces .....	-	3	1	4	-	-	-	-	-	-	-	
31. United States .....	-	-	-	-	-	-	-	-	-	-	-	
(b) Secondary:												
32. Other provinces .....	..	2	-	-	-	-	...	...	...	...	...	
33. United States .....	..	-	-	-	-	-	...	...	...	...	...	
34. Total deliveries of energy .....	..	5	1	4	-	-	...	...	...	...	...	
35. Total energy available (24 + 29 - 34)	..	3,452	3,808	4,121	4,519	4,987	...	...	...	...	...	
36. Secondary energy delivered within province .....	..	-	-	-	-	-	...	...	...	...	...	
37. Firm energy available within province (35 - 36) ..	1,581	3,452	3,808	4,121	4,519	4,987	5,535	6,067	6,585	7,128	7,759	
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-	
39. Firm energy requirement within province (37 + 38)	1,581	3,452	3,808	4,121	4,519	4,987	5,535	6,067	6,585	7,128	7,759	
40. Firm energy requirement on province (30 + 31 + 39)	1,581	3,455	3,809	4,125	4,519	4,987	5,535	6,067	6,585	7,128	7,759	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual					Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	1,578	2,659	2,672	2,599	2,670	2,689	2,693	2,889	2,906	3,613	4,063
2. Steam - Conventional)			( 117	424	475	498	650	659	865	867	
3. Nuclear )	130	369	(	-	-	-	-	-	-	-	-
4. Internal combustion )			( 109	112	106	117	120	123	124	125	126
5. Gas turbine )			( 172	172	177	177	177	177	177	177	177
6. Total net generating capability .....	1,708	3,028	3,070	3,307	3,428	3,481	3,640	3,848	4,072	4,782	5,233
Receipts of firm power from:											
7. Other provinces .....	-	-	5	4	10	12	13	15	18	25	25
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	5	4	10	12	13	15	18	25	25
Deliveries of firm power to:											
10. Other provinces .....	4	3	-	-	-	-	-	-	-	-	-
11. United States .....	30	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	34	3	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) .....	1,674	3,025	3,075	3,311	3,438	3,493	3,653	3,863	4,090	4,807	5,258
<u>Peak loads:</u>											
14. Firm power peak load within province .....	1,275	2,123	2,368	2,317	2,537	2,886	3,037	3,263	3,459	3,617	3,765
15. Indicated shortages .....	-	-	-	-	-	-	30	45	53	59	67
16. Total indicated firm power peak load within province (14 + 15) .....	1,275	2,123	2,368	2,317	2,537	2,886	3,067	3,308	3,512	3,676	3,832
17. Firm power peak load on province (12 + 16)	1,309	2,126	2,368	2,317	2,537	2,886	3,067	3,308	3,512	3,676	3,832
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	399	902	707	994	901	607	586	555	578	1,131	1,426
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	2	9	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual					Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	millions of kilowatt-hours										
Net generation by:											
19. Hydro-electric .....	..	12,584	12,295	13,500	14,194	15,516	...	...	...	...	...
20. Steam - Conventional )		(	535	665	780	1,207	...	...	...	...	...
21. Nuclear )		729	(	-	-	-	...	...	...	...	...
22. Internal combustion )	..	(	246	261	300	293	...	...	...	...	...
23. Gas turbine )		(	10	3	5	4	...	...	...	...	...
24. Total net generation .....	..	13,313	13,086	14,429	15,279	17,020	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	1	4	-	-	-	-	-	-	-
26. United States .....	..	..	1	1	-	2	1	1	1	1	1
(b) Secondary:											
27. Other provinces .....	..	..	-	-	-	-	...	...	...	...	...
28. United States .....	..	..	16	57	19	61	...	...	...	...	...
29. Total receipts of energy .....	..	72	18	62	19	63	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	10	3	6	23	4	1	1	1	1	1	1
31. United States .....	184	2	2	2	2	2	2	2	2	3	3
(b) Secondary:											
32. Other provinces .....	..	27	30	-	23	21	...	...	...	...	...
33. United States .....	..	16	17	14	19	30	...	...	...	...	...
34. Total deliveries of energy .....	..	48	55	39	48	54	...	...	...	...	...
35. Total energy available (24 + 29 - 34) ..	..	13,337	13,049	14,452	15,250	17,029	...	...	...	...	...
36. Secondary energy delivered within province .....	..	233	242	230	268	180	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	6,414	13,104	12,807	14,222	14,982	16,849	17,998	19,727	20,891	21,902	22,924
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	6,414	13,104	12,807	14,222	14,982	16,849	17,998	19,727	20,891	21,902	22,924
40. Firm energy requirement on province (30 + 31 + 39)	6,608	13,109	12,815	14,247	14,988	16,852	18,001	19,730	20,894	21,906	22,928

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast					
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
thousands of kilowatts												
<b>Capability:</b>												
Net generating capability:												
1. Hydro-electric .....	24	44	44	44	44	44	62	62	51	51	51	
2. Steam - Conventional )			( 1	1	1	1	1	1	1	1	1	
3. Nuclear )			( -	-	-	-	-	-	-	-	-	
4. Internal combustion )	-	11	( -	-	-	-	-	-	-	-	-	
5. Gas turbine )			( 10	10	11	13	13	13	14	15	15	
			( -	-	-	2	2	2	2	2	2	
6. Total net generating capability .....	24	55	55	55	56	60	78	78	68	69	69	
Receipts of firm power from:												
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-	
8. United States .....	-	-	-	-	-	-	-	-	-	-	-	
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-	
Deliveries of firm power to:												
10. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-	
11. United States .....	-	-	-	-	-	-	-	-	-	-	-	
12. Total deliveries .....	-	-	-	-	-	-	-	-	-	-	-	
13. Total net capability (6 + 9 - 12) .....	24	55	55	55	56	60	78	78	68	69	69	
<b>Peak loads:</b>												
14. Firm power peak load within province .....	18	34	29	32	32	34	42	42	41	44	47	
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-	
16. Total indicated firm power peak load within province (14 + 15) .....	18	34	29	32	32	34	42	42	41	44	47	
17. Firm power peak load on province (12 + 16)	18	34	29	32	32	34	42	42	41	44	47	
<b>Indicated reserve:</b>												
18. Indicated reserve (13 - 16) .....	6	21	26	23	24	26	36	36	27	25	22	
18a Reduction in generating capability due to adverse conditions .....	..	..	..	..	-	-	...	...	...	...	...	

Yukon and Northwest Territories TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	152	174	187	189	199	...	...	...	...	...
20. Steam - Conventional)			( 2	2	2	3	...	...	...	...	...
21. Nuclear )		14	( -	-	-	-	...	...	...	...	...
22. Internal combustion )	..		( 19	24	24	22	...	...	...	...	...
23. Gas turbine )			( -	-	-	4	...	...	...	...	...
24. Total net generation .....	..	166	195	213	215	228	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	..	-	-	-	-	...	...	...	...	...
26. United States .....	..	..	-	-	-	-	...	...	...	...	...
(b) Secondary:											
27. Other provinces .....	..	..	-	-	-	-	...	...	...	...	...
28. United States .....	..	..	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	..	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
31. United States .....	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	166	195	213	215	228	...	...	...	...	...
36. Secondary energy delivered within province .....	..	28	42	51	50	65	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	89	138	153	162	165	163	173	202	190	199	206
38. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	89	138	153	162	165	163	173	202	190	199	206
40. Firm energy requirement on province(30 + 31 + 39)	89	138	153	162	165	163	173	202	190	199	206



TABLE 2. Total Net Generating Capability within Provinces(1)

Province	1954	1960	1961	1962	1963	1964	Forecast				Percentage change (compounded)		
							1965	1966	1967	1968	1969	1954 1964	1960 1964 1969
							thousands of kilowatts						
Newfoundland (including Labrador) . . . .	223	309	311	409	496	498	501	503	708	704	774	8.36	12.67 9.22
Prince Edward Island . . . . .	18	38	37	37	58	58	58	61	81	81	81	12.41	11.15 6.91
Nova Scotia . . . . .	318	499	508	521	532	527	622	660	671	692	692	5.18	1.37 5.60
New Brunswick . . . . .	244	388	436	480	535	534	568	679	800	906	1,008	8.15	8.31 13.55
Quebec . . . . .	5,413	8,764	8,738	8,919	9,376	9,696	10,606	11,052	11,454	12,686	13,379	6.00	2.56 6.63
Ontario . . . . .	4,088	6,650	6,858	7,223	7,989	7,990	8,553	9,075	9,776	10,406	11,507	6.93	4.70 7.57
Manitoba . . . . .	568	932	1,030 <sup>F</sup>	1,033	1,033	1,034	1,360	1,360	1,361	1,361	1,473	6.17	2.63 7.34
Saskatchewan . . . . .	328	752	757	752	775	912	912	955	995	1,101	1,295	10.77	4.94 7.27
Alberta . . . . .	396	925	953	1,133	1,200	1,235	1,387	1,673	1,958	2,056	2,057	12.05	7.49 10.74
British Columbia . . . . .	1,708	3,028	3,070	3,307	3,428	3,481	3,640	3,848	4,072	4,782	5,233	7.38	3.55 8.50
Yukon and Northwest Territories . . . . .	24	55	55	55	56	60	78	78	68	69	69	9.60	2.20 2.83
Canada . . . . .	13,328	22,340	22,753 <sup>F</sup>	23,869	25,478	26,025	28,285	29,944	31,944	34,844	37,568	6.92	3.89 7.62

(1) Table 1, item 6.

TABLE 3. Firm Power Peak Load within Provinces(1)

Province	1954	1960	1961	1962	1963	1964	Forecast			Percentage change (compounded)		
							1965	1966	1967	1968	1969	1954 1964 1964 1969
thousands of kilowatts												
Newfoundland (including Labrador) . . . .	201 <sup>r</sup>	245	242	294	349	376	460	472	512	519	531	6.46 11.30 7.15
Prince Edward Island . . . . .	11	21	24	25	27	31	34	36	40	43	48	10.92 10.23 9.14
Nova Scotia . . . . .	245 <sup>r</sup>	356	347	388	411	462	473	499	526	558	588	6.55 6.73 4.94
New Brunswick . . . . .	210	319	319	347	401	437	523	621	720	773	835	7.60 8.19 13.83
Quebec . . . . .	4,092	5,871	6,258	6,370	7,118	7,654	8,517	9,139	9,791	10,406	10,967	6.44 6.86 7.46
Ontario . . . . .	4,261	6,391	6,615	6,913	7,412	7,897	8,399	8,959	9,471	10,035	10,657	6.37 5.43 6.18
Manitoba . . . . .	533	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370	6.54 6.79 6.41
Saskatchewan . . . . .	196	418	466	497	531	619	669	729	752	861	936	12.19 10.31 8.62
Alberta . . . . .	313	714	836	882	984	1,106	1,160	1,274	1,399	1,532	1,696	13.45 11.56 8.93
British Columbia . . . . .	1,275	2,123	2,368	2,317	2,537	2,886	3,037	3,263	3,459	3,617	3,765	8.51 7.98 5.46
Yukon and Northwest Territories . . . . .	18	34	29	32	32	34	42	42	41	44	47	6.57 0.00 6.69
Canada . . . . .	11,355 <sup>r</sup>	17,264	18,353	18,972	20,757	22,506	24,392	26,176	27,926	29,681	31,440	7.08 6.85 6.92

(1) Table 1, item 14.

TABLE 4. Firm Energy Requirement within Provinces (1)

Province	1954	1960	1961	1962	1963	1964	Forecast				Percentage change (compounded)			
							1965	1966	1967	1968	1969	1954 1964	1960 1964	1964 1969
millions of kilowatt-hours														
Newfoundland (including Labrador) . . . .	1,234	1,320	1,361	1,473	1,878	2,293	2,678	2,719	3,049	3,086	3,152	6.39	14.81	6.57
Prince Edward Island . . . . .	46	79	88	101	111	124	139	155	173	193	212	10.43	11.93	11.32
Nova Scotia . . . . .	1,253	1,714	1,775	1,965	2,100	2,301	2,430	2,597	2,758	2,927	3,115	6.27	7.64	6.25
New Brunswick . . . . .	1,199	1,674	1,782	1,912	2,095	2,410	2,921	3,415	3,895	4,165	4,464	7.23	9.54	13.11
Quebec . . . . .	27,955	38,552	39,022	40,389	42,103	47,090	49,704	52,724	56,203	59,637	63,357	5.35	5.13	6.11
Ontario . . . . .	23,929	36,382	37,727	39,631	41,529	44,814	47,742	51,161	54,044	57,462	60,790	6.48	5.35	6.29
Manitoba . . . . .	2,886	4,201	4,698	5,003	5,445	5,673	6,023	6,347	6,731	7,068	7,440	7.09	7.80	5.57
Saskatchewan . . . . .	742	1,666	1,855	2,064	2,327	2,658	2,939	3,266	3,542	3,859	4,207	13.61	12.39	9.62
Alberta . . . . .	1,581	3,452	3,808	4,121	4,519	4,987	5,535	6,067	6,585	7,128	7,759	12.17	9.63	9.24
British Columbia . . . . .	6,414	13,104	12,807	14,222	14,982	16,849	17,998	19,727	20,891	21,902	22,924	10.14	6.49	6.35
Yukon and Northwest Territories . . . . .	89	138	153	162	165	163	173	202	190	199	206	6.24	4.25	4.80
Canada . . . . .	67,328	102,282	105,076	111,043	117,254	129,362	138,282	148,380	158,061	167,626	177,626	6.75	6.05	6.55

Table 1. Item 30

(1) Table 1, item 39.

TABLE 5. Indicated Reserve(1)

Province	1954	1960	1961	1962	1963	1964	Forecast				Percentage change (compounded)			
							1965	1966	1967	1968	1969	1954 1964	1960 1964	1964 1969
thousands of kilowatts														
Newfoundland (including Labrador):														
1. Gross capability .....	223	309	311	409	496	498	501	503	708	704	774	8.36	12.67	9.22
2. Firm power peak load on province ...	202	259	255	307	387	397	469	481	521	528	540	6.99	11.27	6.35
3. Indicated reserve (1 - 2) .....	21	50	56	102	109	101	32	22	187	176	234	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	10.4	19.3	22.0	33.2	28.2	25.4	6.8	4.6	35.9	33.3	43.3	...	...	...
Prince Edward Island:														
1. Gross capability .....	18	38	37	37	58	58	58	61	81	81	81	12.41	11.15	6.91
2. Firm power peak load on province ...	11	21	24	25	27	31	34	36	40	43	48	10.92	10.23	9.14
3. Indicated reserve (1 - 2) .....	7	17	13	12	31	27	24	25	41	38	33	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	63.6	81.0	54.2	48.0	114.8	87.1	70.6	69.4	102.5	88.4	68.8	...	...	...
Nova Scotia:														
1. Gross capability .....	318	499	508	521	532	527	622	660	671	692	692	5.18	1.37	5.60
2. Firm power peak load on province ...	250	359	348	389	412	463	498	499	526	558	588	6.36	6.57	4.90
3. Indicated reserve (1 - 2) .....	68	140	160	132	120	64	124	161	145	134	104	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	27.2	39.0	46.0	33.9	29.1	13.8	24.9	32.3	27.6	24.0	17.7	...	...	...
New Brunswick:														
1. Gross capability .....	246	395	442	488	542	545	603	690	811	918	1,021	8.28	8.38	13.38
2. Firm power peak load on province ...	215	342	341	375	429	470	563	662	762	818	883	8.14	8.27	13.44
3. Indicated reserve (1 - 2) .....	31	53	101	113	113	75	40	28	49	100	138	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load ....	14.4	15.5	29.6	30.1	26.3	16.0	7.1	4.2	6.4	12.2	15.6	...	...	...

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18)

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserve(1) - Continued

Province	1954	1960	1961	1962	1963	1964	Forecast					Percentage change (compounded)			
							1965	1966	1967	1968	1969	1954 1964	1960 1964	1964 1969	
thousands of kilowatts															
Quebec:															
1. Gross capability .....	5,418	8,780	8,759	8,936	9,388	9,714	10,625	11,071	11,474	12,706	13,400	6.01	2.56	6.65	
2. Firm power peak load on province ...	4,867	6,626	6,992	7,071	7,827	8,371	9,152	9,775	10,427	11,000	11,562	5.57	6.02	6.68	
3. Indicated reserve (1 - 2) .....	551	2,154	1,767	1,865	1,561	1,343	1,473	1,296	1,047	1,706	1,838	...	...	...	
4. Indicated reserve expressed as a per cent of firm power peak load .....	11.3	32.5	25.3	26.4	19.9	16.0	16.1	13.3	10.0	15.5	15.9	...	...	...	
Ontario:															
1. Gross capability .....	4,820	7,344	7,553	7,915	8,688	8,699	9,180	9,702	10,403	10,990	12,091	6.08	4.33	6.81	
2. Firm power peak load on province ...	4,347	6,479	6,706	7,004	7,502	8,003	8,461	9,022	9,536	10,101	10,725	6.30	5.42	6.03	
3. Indicated reserve (1 - 2) .....	473	865	847	911	1,186	696	719	680	867	889	1,366	...	...	...	
4. Indicated reserve expressed as a per cent of firm power peak load .....	10.9 <sup>r</sup>	13.4	12.6	13.0	15.8	8.7	8.5	7.5	9.1	8.8	12.7	...	...	...	
Manitoba:															
1. Gross capability .....	648	1,018	1,113 <sup>r</sup>	1,120	1,167	1,128	1,445	1,445	1,446	1,446	1,558	5.70	2.60	6.67	
2. Firm power peak load on province ...	546	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370	6.28	6.79	6.42	
3. Indicated reserve (1 - 2) .....	102	246	264 <sup>r</sup>	213	212	124	367	303	231	153	188	...	...	...	
4. Indicated reserve expressed as a per cent of firm power peak load .....	18.7	31.9	31.1 <sup>r</sup>	23.5	22.2	12.4	34.0	26.5	19.0	11.8	13.7	...	...	...	
Saskatchewan:															
1. Gross capability .....	328	753	757	752	775	912	912	955	995	1,101	1,295	10.77	4.90	7.27	
2. Firm power peak load on province ...	276	504	554	584	665	713	754	814	837	946	1,021	9.96	9.06	7.45	
3. Indicated reserve (1 - 2) .....	52	249	203	168	110	199	158	141	158	155	274	...	...	...	
4. Indicated reserve expressed as a per cent of firm power peak load .....	18.8 <sup>r</sup>	49.4	36.6	28.8	16.5	27.9	21.0	17.3	18.9	16.4	26.8	...	...	...	

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).



TABLE 5. Indicated Reserve(1) - Concluded

Province	1954	1960	1961	1962	1963	1964	Forecast				Percentage change (compounded)			
							1965	1966	1967	1968	1969	1954 1964	1960 1964	1964 1969
thousands of kilowatts														
Alberta:														
1. Gross capability .....	400	928	953	1,133	1,200	1,235	1,387	1,673	1,958	2,056	2,057	11.93	7.41	10.74
2. Firm power peak load on province ...	313	715	841	886	994	1,118	1,173	1,289	1,417	1,557	1,721	13.58	11.83	9.01
3. Indicated reserve (1 - 2) .....	87	213	112	247	206	117	214	384	541	499	336	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	27.8	29.8	13.3	27.9	20.7 <sup>r</sup>	10.5	18.2	29.8	38.2	32.0	19.5	...	...	...
British Columbia:														
1. Gross capability .....	1,708	3,028	3,075	3,311	3,438	3,493	3,653	3,863	4,090	4,807	5,258	7.42	3.64	8.52
2. Firm power peak load on province ...	1,309	2,126	2,368	2,317	2,537	2,886	3,067	3,308	3,512	3,676	3,832	8.23	7.94	5.83
3. Indicated reserve (1 - 2) .....	399	902	707	994	901	607	586	555	578	1,131	1,426	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	30.5	42.4	29.9	42.9	35.5	21.0	19.1	16.8	16.5	30.8	37.2	...	...	...
Yukon and Northwest Territories:														
1. Gross capability .....	24	55	55	55	56	60	78	78	68	69	69	9.60	2.20	2.83
2. Firm power peak load on province ...	18	34	29	32	32	34	42	42	41	44	47	6.57	0.00	6.69
3. Indicated reserve (1 - 2) .....	6	21	26	23	24	26	36	36	27	25	22	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	33.3	61.8	89.7 <sup>r</sup>	71.9	75.0	76.5	85.7	85.7	65.9	56.8	46.8	...	...	...
Canada:														
1. Gross capability .....	13,332	22,340	22,755 <sup>r</sup>	23,873	25,480	26,027	28,287	29,946	31,946	34,846	37,570	6.92	3.89	7.62
2. Firm power peak load on Canada .....	11,535	17,430	18,499	19,093	20,907	22,648	24,514	26,315	28,075	29,840	31,611	6.98	6.77	6.89
3. Indicated reserve (1 - 2) .....	1,797	4,910	4,256 <sup>r</sup>	4,780	4,573	3,379	3,773	3,631	3,871	5,006	5,959	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load .....	15.6	28.2	23.0 <sup>r</sup>	25.0	21.9	14.9	15.4	13.8	13.8	16.8	18.9	...	...	...

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).  
<sup>r</sup> Revised figures.

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.

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1964-1965

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